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THE OFFICIAL

**ARMY**  
INFORMATION  
**DIGEST**

U.S. ARMY MAGAZINE

AUGUST 1960

# ARMY INFORMATION DIGEST



THE OFFICIAL MAGAZINE OF  
THE DEPARTMENT OF THE ARMY

The mission of ARMY INFORMATION DIGEST is to keep personnel of the Army aware of trends and developments of professional concern. The Digest is published under supervision of the Army Chief of Information to provide timely and authoritative information on policies, plans, operations, and technical developments of the Department of the Army to the Active Army, Army National Guard, and Army Reserve. It also serves as a vehicle for timely expression of the views of the Secretary of the Army and the Chief of Staff and assists in the achievement of information objectives of the Army.

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**DAVY CROCKETT**, a proud name out of America's pioneering past, now describes the Army's newest man- or jeep-portable weapons system, capable of delivering atomic or conventional firepower in support of front-line battle groups. Launcher was shown at Project Man.

## COMMAND LINE

### Army Views On Vital Issues

#### ON MANAGEMENT AS A WEAPON

"It is the function of Army management to assist in the integration of all the diverse elements of military capability—science, technology, manpower, money and materiel—in order to insure that the ability of the United States Army to carry out its imperative mission is constantly increased.

"We can foresee that victory in any future conflict may go to the country or coalition with the most resources readily convertible into military strength through superior management, for it is evident that we could lose to a hostile power through the inefficient utilization of our resources just as surely as we could lose through poor strategy or tactics, or the ineffective application of technological knowledge to military problems.

*Secretary of the Army Wilber M. Brucker  
at the Army Management School  
Fort Belvoir, Virginia, 1 March 1960*

#### ON STRENGTH AS A WAR-PREVENTIVE

"Most basically, the object of all our military effort is to prevent war. To do so, however, requires us to maintain military strength which is capable of winning war if deterrence fails. Our ability to win must be clearly evident, which means that it must stem from the types of force which the prospective enemy recognizes will insure the defeat of any military aggression he might consider undertaking. The more clearly we possess this ability, the less likely we are to be called upon to employ it."

*General Lyman L. Lemnitzer, Army Chief of Staff  
in Armed Forces Day address  
Savannah, Georgia, 21 May 1960*

#### ON THE BUSINESS OF DEFENSE

"The military services will utilize about one-tenth of all the goods and services produced in the United States during the current fiscal year. They will spend 58 cents of every dollar spent by the Federal Government. Their expenditures will be equivalent to \$225 for every man, woman, and child in this country. These figures help to emphasize the tremendous business management responsibilities which rest upon the shoulders of military commanders today."

*Secretary of the Army Wilber M. Brucker  
at the Army Management School  
Fort Belvoir, Virginia, 1 March 1960*

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UNITED STATES OF AMERICA

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U. S. ARMY MAGAZINE

**AUGUST 1960**  
VOLUME 15 NUMBER 8



**As demonstrated at Project Man,  
modern materiel and tactical doctrine  
are transformed into combat power  
by the strategic SAM-60**

# Soldier

## The Ultimate

**I**N A ROUSING SALUTE to the American soldier—the “ultimate weapon” in any conflict—famed Fort Benning, Georgia, home of the Infantry, was the scene of an impressive three-day display of Army weapons, equipment and tactical techniques early in May. Project MAN (Modern Army Needs), showed the teamwork and skill of American soldiers using modern weapons as “the cutting edge of that very complex machine—the U. S. Army.”

Opening with a night live-fire demonstration of a rifle company reinforced by supporting weapons, the program included a daytime helicopter-borne “air-mobile assault,” followed by examples of Army aviation and pathfinder operations, a sky-diving exhibition, air-borne troops in action, modern river-crossing methods, and Ranger combat techniques.

Rockets and missiles—including the Corporal, Sergeant, Pershing, Honest John rocket, Lacrosse and Nike-Hercules—were demonstrated with carriers, launching equipment and support elements. Actual drops using the latest methods of aerial delivery of equipment were made.

In day and night exercises, a diversified arsenal of Army weapons was brought into action—all designed to support the ultimate weapon, Man. Many items—including the M-14 rifle—have progressed beyond the research and development stage, are actually in quantity production, and are being made available to troops. The first M-60 tank has been accepted by the Army. A limited number of these—capable of defeating any known Soviet armor—will be issued in the near future.

Shown for the first time was the launcher for the Davy Crockett, a



mortar-like man- and jeep-portable weapon system with atomic and conventional capability which will be employed by front-line troops. Also on display was the Nike-Zeus, the Nation's only ballistic missile defense system now under development and test.

theme of all demonstrations was the Army's determination that the individual soldier's capability and courage shall be adequately supported by the most modern weapons, communications, firepower and transportation.

As Lt. Gen. Arthur G. Trudeau,

# American, Model 1960

## Indispensable Weapon

HEADING the roster of more than 600 distinguished guests were President Eisenhower, Secretary of Defense Thomas S. Gates, Jr., and Secretary of the Army Wilber M. Brucker. United States military leaders present included General Lyman L. Lemnitzer, Army Chief of Staff, other top Army leaders and ranking members of the Navy, Air Force and Marine Corps. General of the Army Omar N. Bradley, former Chairman of the Joint Chiefs of Staff, and retired Army Chiefs of Staff Generals J. Lawton Collins and Matthew B. Ridgway were also present.

Observers included Members of the Congress and National Security Council, representatives of NATO, SHAPE, Canada, Panama, Hawaii. Key members of the science-industry team from firms manufacturing Army equipment witnessed the mammoth array of military might.

Throughout Project Man, emphasis was not upon weapons and equipment as such, but upon their function as essential tools of the American soldier. The central

Army Chief of Research and Development, pointed out: "Today's modern technology is exploding on all fronts and revolutionizing man's concept of war!" The day when the soldier needed only a personal weapon and limited knowledge of small unit tactics has been replaced by an era of missiles, atomic weapons, radar surveillance, air-mobility and complicated tactics demanding a high degree of training and technical competence.

Confidence that the American soldier is not only equal to the challenge but holds the key to victory in any future conflict was expressed by Secretary of the Army Brucker.

By combining the ingredients of soldierly skill and tenacity with the finest materiel obtainable from American science and industry, Project Man demonstrated that the defense of the Nation rests in the competent hands and courageous hearts of the American soldier—the "ultimate weapon" who stands alert and ready for instant response to the fast-moving conditions of today's or tomorrow's warfare.



## At Project Man—

### The President Speaks

#### On Men, Morale, Materiel

Secretary Gates, Secretary Brucker, General Lemnitzer, General Morris, and all officers and men, and distinguished guests:

**A**T A TIME such as this, an old soldier is tempted to reminisce, but I think most of you are sufficiently old in the Service to know that it is a dangerous habit to get into. I should like to go back to the days of 1911 when General Bradley and I entered the Academy and talk about the amazing differences that have come about when we think about or see the Infantry. . . .

I agree with what Secretary Brucker has to say about the importance of the man that is handling these things; but we must go back first to the scientist who is doing the research to dream up these ideas—the great skill and the patient hours that it takes to bring them finally into being in the pilot model form. . . . And finally, the great study and the work that must go into obtaining procurement with the greatest possible economy. And then the fine instructors that tell us how to use them. . . .

America now has a defense problem that goes back to every village in our country; and in the Armed Forces the problem reaches . . . from the very top to the very bottom. Everybody must not only learn a technique—he must get into his head that this is a nation defending itself, not a professional soldier defending somebody else. We are all working as a team.

From the very first demonstration that I saw this morning, I felt this oneness, this unity, of America producing these tremendous and wonderful weapons, and with a great organization taking them from the producers and the scientists and learning to use them so expertly. Every minute that I have been here, I have wanted to give some salute to the entire team that does these things.

And finally, I want to talk just one word about the spirit that is behind all this—the finest type of patriotism. *A day like this makes a man quite ready to call all those people mistaken, if not worse, who say that America has become soft and is not capable of defending itself.* In other words, gentlemen, . . . I am so proud of you that I really have no words in which to express it.

Far from thanking me for being here today, I thank you for letting me have such a wonderful time, to come back to old comrades—indeed, to a spot which I have seen before in my service—and to have that satisfaction of talking with old friends, or if they are not old friends individually, in spirit, that have been American soldiers as I was in the days when I was a junior, working then as you are today.

So, to each of you, congratulations, and thank you very much.

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DIGEST



First battle group tactical atomic weapons system to give added punch to U. S. forces is the Davy Crockett which is light enough to be carried, set up, fired by three men.



Statue of charging infantryman forms dramatic backdrop as Secretary of the Army Brucker speaks at Project Man.



## Man—the Ultimate Weapon

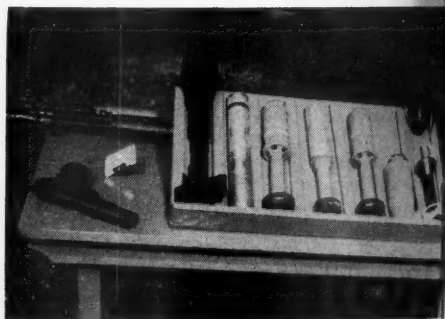
Demonstrating how an infantry company meets an attack, blunts it, then channels it into areas where heavier weapons can find profitable targets, exercise emphasized the importance of Man with a rifle, determined to fight.

Redeye guided missile is under development to provide surface-to-air, shoulder-fired protection against aircraft.

The rifle is the main weapon of the Man, and the new M14 now in production will provide better means to defeat his enemy.



Even greater firepower is available to infantry in form of 106mm recoilless rifle mounted on Mechanical Mule.



Not only a hail of bullets but destruction-spreading grenades of various types can be adapted to fire from the soldier's rifle.

"Underscoring Modern Army Needs, Project MAN emphasizes the fundamental and primary concern of the United States Army that each individual soldier, who bears such grave responsibilities, shall be adequately conditioned, equipped and supported to accomplish his vital mission."

Secretary of the Army Wilber M. Bricker

# Weapon Toward Maximum Mobility

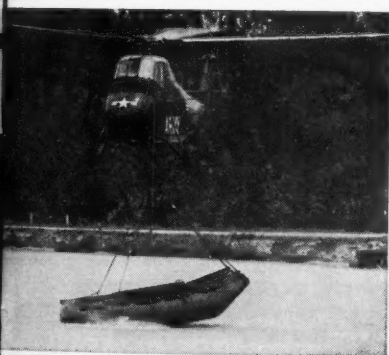
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In its continual search for ways and means of moving Man anywhere he may be needed, regardless of difficulties of terrain, to meet any war situation, the Army is seeking constantly improved methods of mobility.



The ubiquitous 1/4-Ton, for instance, can be hauled or carried by helicopter for use on land where and when needed.

Great emphasis is placed on making equipment air-transportable so that it can be moved speedily to meet soldier's needs.



Putting a ponton down at a spot selected for a river crossing marks start of bridging operation by troops.



Heavy raft M4T6 equipment allows tanks to cross the water obstacle, to deliver heavy firepower in support of infantry.

"The school of thought which leaps to the theory that man is no longer needed in an era of missiles, space, and nuclear weapons has failed flatly to answer the basic question: How do you seize and hold, or recapture and control, contested ground without flesh and blood and brains?"

"As long as man's natural habitat is on earth the answer seems obvious."

**Lt. Gen. Arthur G. Trudeau**  
Chief of Research and Development  
Department of the Army

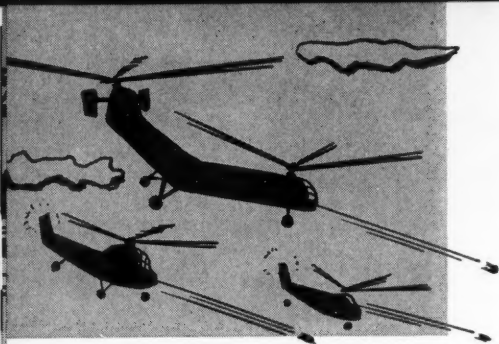
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## Airmobile Assault

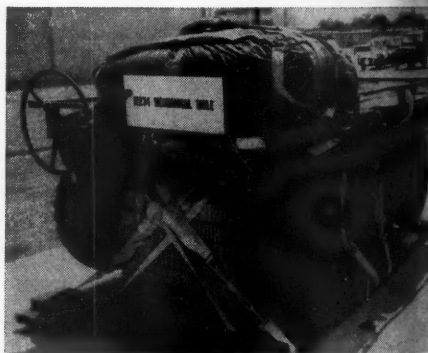
Concepts of future war visualizing dispersal on one hand yet maintaining power to destroy the enemy pose conflicting requirements. One answer lies in the ready availability of air vehicles.



Having landed combat troops, helicopters at left wheel off, while at right the low-flying machines hover near the ground to provide suppressive fire.



The versatile helicopter not only moves troops but provides means for ground mobility. Here the H34 flies material to build a foot-bridge.



"... Note the great reliance which the Army must place on the individual soldier. His stamina, flexibility, courage, intelligence and dedication are qualities which no inanimate piece of equipment, however "modern," can replace. These qualities have never been found lacking in the American soldier, and we must ensure that they never are."

**General Lyman L. Lemnitzer**  
Chief of Staff, United States Army

Ready to take to the air is a new Mechanical Mule which can serve as personnel carrier or mount recoilless weapon.

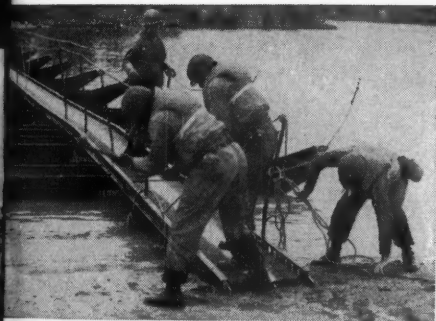
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## One More River to Cross

Crossing a water obstacle under fire is one of the most difficult and dangerous missions that can confront infantry. A high degree of mobility and decentralized execution are required for success.



Use of boats is fundamental method in gaining bridgehead. Men storm ahead to keep enemy off balance.



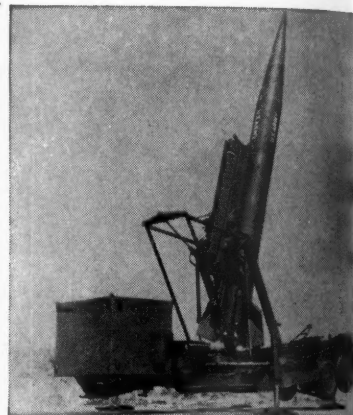
Footbridge allows attackers to move swiftly across a river obstacle. At left, last sections are secured; right, the infantry pushes across to come to grips with enemy.

Heavy rafts provide means for commanders to hurl tanks, artillery, vehicles and troops across an intervening water obstacle.



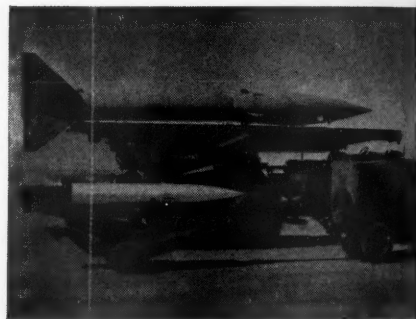
## New Artillery Look

Differing vastly in appearance from tubed weapons, rockets and missiles are regarded as artillery. They perform same function but are capable of greater ranges and of delivering nuclear fire.



Corporal was first operational member of Army's family of surface-to-surface guided missiles, has range of about 75 miles.

Sergeant, at top right, can be set up and fired rapidly to combine a swift punch with mobile capability.



The 762mm Honest John, a free artillery rocket, dwarfs "baby brother" Little John developed to augment nuclear firepower of U. S. divisions.



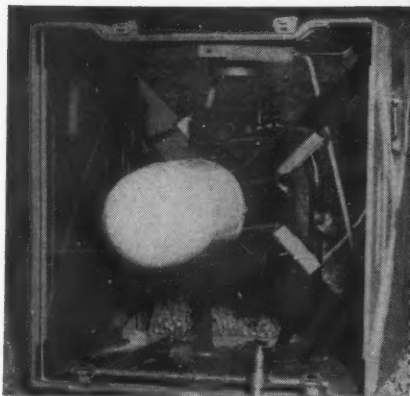
In burst of flame, a 4.5 rocket takes off from a multiple-rocket launcher to add its hitting power to support man in field.

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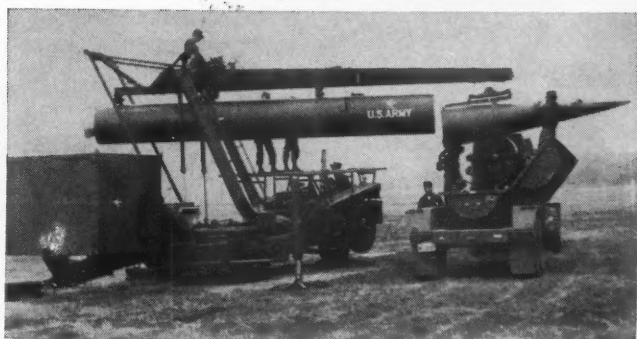
Little John has high degree of mobility to make it ideal "fire brigade" nuclear weapon for the infantryman in action.



French-developed SS10, right, is an anti-tank guided missile in use by U. S. Army. SS11, at left, is being evaluated.



Nose section of Sergeant missile is unloaded from transporter trailer and assembled on an erector-launcher rig.

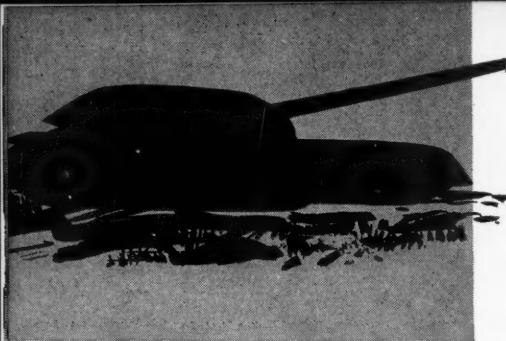


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New Pershing, now under development to replace larger Redstone, was given first public viewing at Project Man.



## Heavy Firepower

The company commander through a forward observer may request support fire and if nature of the target warrants, a variety of weapons will respond. Many weapons were fired during Project Man while others were displayed.

The 175mm self-propelled gun has long range, can be used against personnel and vehicles or to reduce fortified points.



New T-196 self-propelled 155mm howitzer, which is to replace existing M44, can be air transported, has wide cruising range.



Twin-mounted 40mm automatic air defense weapon also can fire on ground targets. Above, the 155mm howitzer is used to support mobile forces.



The 8-inch howitzer is one of organic nuclear delivery means available to the commander in any type of weather.



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Tank transporters can evacuate vehicles for repair or move them to forward areas to fight, thus saving wear and tear on both tanks and roads.

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Army's new main battle tank, M60, below, is armed with 105mm gun, utilizes new 750 horsepower diesel engine.



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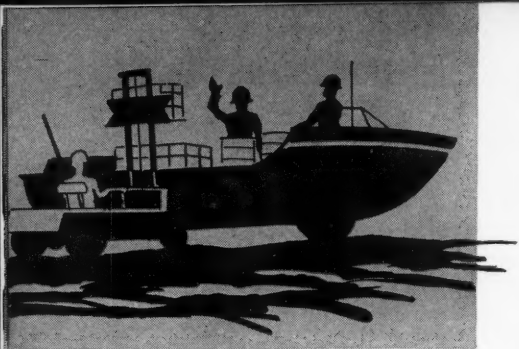
Self-propelled 105mm howitzer is mounted on modified light tank chassis, has 6-cylinder air cooled engine, speed of 35 m.p.h.

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Dozer tank T118 is general-purpose combat engineer vehicle to clear path for tanks, also can be used as tank retriever.

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## Versatile Mobility

New ideas, new concepts, new methods of moving Man and the equipment needed to fight modern war include a wide variety of versatile vehicles that float or move over the ground—or just above it.



Newest amphibian is the LARC, a candidate to succeed the famed World War II DUKW. LARC-15, left, can carry fifteen tons of cargo. LARC-5, right, carries five tons at 9 mph in water or 30 mph on land.



Huge tires of Overland Train enhance its mobility as it travels in sand or through mud.

Lighter than 1/4-Ton, new tactical vehicle below can carry even more payload. At right, Mechanical Mule negotiates steep grade.





## ARMY-INDUSTRY TEAM

Leading defense products manufacturers represented at Project Man:

AVCO Corp.  
Beech Aircraft Corp.  
Borg Warner Corp.  
Chrysler Corp.  
Curtiss-Wright Corp.  
DeHavilland Aircraft of  
Canada, Ltd.  
Douglas Aircraft Co., Inc.  
Emerson Electric  
Manufacturing Co.  
Fairchild Engine and  
Airplane Corp.

Firestone Tire and Rubber  
Co.

Food Machinery and  
Chemical Corp.

General Dynamics Corp.

General Electric Co.  
(Heavy Military Electronics  
Dept.)

General Electric Co.  
(Missiles and Space  
Vehicles Dept.)

Grumman Aircraft  
Engineering Corp.

High Standard  
Manufacturing Co.

Hughes Aircraft Co.

Lockheed Aircraft Corp.

The Martin Co.

North American Aviation,  
Inc.

Northrup Corp.

Radio Corporation of  
America

Raytheon Corp.

Reynolds Metals Co.

Sperry Gyroscope Co.

Sylvania Electric Products,  
Inc.

Thiokol Chemical Corp.

Thompson Ramo Woolridge,  
Inc.

United States Steel Corp.

Boeing Aircraft Co.  
(Vertol Division)

Western Electric Co., Inc.

United Aircraft Corp.  
(Pratt and Whitney Aircraft  
Division)

Westinghouse Electric Corp.

Willys Motors, Inc.

*Nature provides protective cover for the Engineers' unique*

# City Under



**E**IGHT hundred miles from the North Pole on the desolate, frozen wastes of the Greenland Ice Cap, where the temperature hits 70 degrees below zero in winter and winds of hurricane velocity are

common, scientists and soldiers of the U. S. Army Corps of Engineers are building a "city" under the snow. When it is completed, scientists of the Army's Technical Services will be able to carry on vital



# eThe Snow

## Brigadier General S. R. Hanmer

polar research and development programs the year around—all this in one of the most forbidding areas on earth. Moreover, they will work, live, relax in comparative comfort.

Camp Century, as the installation is called, is being constructed with the approval of the Government of Denmark—since Greenland is sovereign Danish territory. The construction site is 138 miles southeast of Camp Tuto, headquarters of the U. S. Army Polar Research and Development Center, which furnishes administrative, supply and maintenance support for all Army activities on the Ice Cap. Camp Tuto, on the edge of the Ice Cap, is 14 miles from Thule Air Base in northwestern Greenland.

ALTHOUGH not the first undersnow installation to be built by the Engineers in Greenland, Camp Century is unique in that it will be the first to be heated, lighted and its power supplied by a nuclear

power plant. Permission for installation of a prefabricated nuclear power plant was granted by the Danish Government.

The need for such an installation was foreseen as far back as 1955, after the Engineer Arctic Task Force had completed its second summer of activity on the Ice Cap. At that time scientists from the Snow, Ice and Permafrost Establishment at Wilmette, Illinois, the Engineer Research and Development Laboratories, Waterways Experiment Station and the Arctic Construction Frost Effects Laboratory—all engaged in research projects in that region—concluded that an undersnow camp was both feasible and eminently desirable since it would make possible continuation of field tests during the long, dark polar winters.

Studies further indicated that the hazards of oversnow supply and maintenance could be eliminated by constructing a protected, undersnow roadway—in effect a tunnel which would link up with the base of operations at Camp Tuto. It

**BRIGADIER GENERAL S. R. HANMER** is Deputy Chief of Engineers for Military Operations, Office of the Chief of Engineers.



## ***City Under the Snow***

was calculated that this could be accomplished for a fraction of the cost of building a surface highway under normal conditions in the United States. Current construction plans, however, make no provision for such an undersnow road.

IN 1957, a unit of the Engineer Arctic Task Force equipped with building materials, supplies, and a Swiss type of snow plow for trenching operations set out for an area on the Ice Cap about 220 miles east of Camp Tuto. Here construction of a camp, known as Site II, began. Trenches 20 feet deep and about 20 feet wide were cut, then covered by roofs of snow on supporting trusses or metal arches. In these tunnels, Jamesway shelters were erected which provided living quar-

ters, dining and kitchen areas, maintenance shops, recreation and storage areas and even a Post Exchange.

Laboratories in which scientists could work with core samples of snow and ice drilled from hundreds of feet beneath the surface, were hewed out of the packed snow by the big plow and connected with the rest of the camp by similar tunnels. The camp was equipped with modern plumbing, hot and cold running water, and electricity for light, power and heat.

Site II was the initial test. The 125 to 140 military personnel and civilians who spent the last three summers there are for the most part veterans of Arctic expeditions, well aware of the rigors of the northland. They worked long hours

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## ***Nuclear Reactor for Greenland Ice Cap***

THE first remote-area installation of "portable" atomic power in the Free World will be a nuclear reactor to provide year-around heat and power at the U. S. Army's Camp Century on the Greenland Ice Cap. It is expected to be in operation before the end of this year.

Known as the PM-2A, the prefabricated, pressurized water, nuclear power station will be installed in snow tunnels at the advanced base of the Army's Polar Research and Development Center. Some 100 engineers and scientists conducting research studies on the Ice Cap will man the new installation.

Now being built by ALCO Products, Inc., at Dunkirk, New York, under a \$3,226,560 contract, the plant will deliver about 1500 kilowatts of electricity, plus 1000 pounds of steam per hour to be used for purification. The entire plant will be transported by air, assembled and tested.

Substantial savings are anticipated in operation of such a plant over present methods of supplying electricity. At some arctic installations, an estimated 70 to 80 percent of the supply effort involves transportation of fuel oil—at a cost of more than a dollar per gallon for delivered diesel fuel. Estimated annual requirement for a diesel-fueled plant comparable in capacity to the PM-2A would be about a million gallons. By contrast, the PM-2A should operate for a year on a single loading of enriched uranium fuel—less than an ordinary plane load.

Installation of the nuclear power plant is being made under an agreement between the governments of the United States and Denmark.

in the almost constant daylight and were comparatively comfortable and happy in their surroundings. Morale was exceptionally high. The experience at Site II proved that an undersnow installation was the practical way to cope with the problems of polar living.

With the developing idea for a more permanent type of installation, attention of the Corps' polar experts turned to the problem of speeding up and improving the technique of trenching. Scientists and engineers attached to the U. S. Army Polar Research and Development Center developed a technique for cutting a trench with a narrow opening at the top and widening out to 20 or more feet at the bottom. In the summer of 1958 they built a number of these experimental tunnels at Site II, cutting a thousand foot trench in 100 hours.

EARLY in 1959, with approval granted by Lt. Gen. Arthur G. Trudeau, Chief of Army Research and Development, and initial funds allocated, the way was cleared for construction of Camp Century. In April, 450 officers and men of the U. S. Army Polar Research and Development Center (PR&DC) began leaving Fort Belvoir for summer headquarters at Camp Tuto. By 15 May, equipment, building materials and supplies were moving to the Camp Century site. Actual construction under command of Col. J. H. Kerkerling began about 1 June.

During the 1959 summer season, with temperatures ranging from about zero up to 30° F., the surface camp for the construction party was built, the main corridor of the undersnow "city" and interconnecting corridors were cut by snow

plows, and some of the prefabricated undersnow buildings were erected. This year work was resumed in late spring.

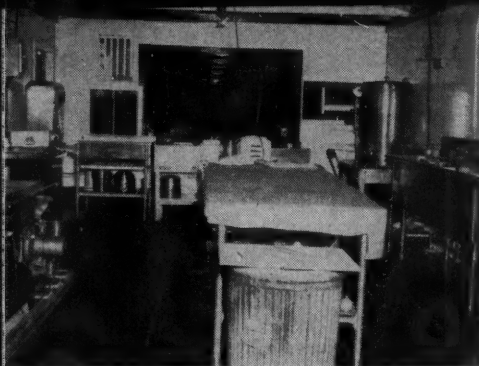
### Unique Design

ALMOST every aspect of design and construction of the "subterranean city" required radical departure from normal engineering methods. The quarters, shops and laboratories are made of specially insulated, prefabricated shells erected within the chambers hollowed out of the snow. Ventilation, sewage disposal and water supply required design of systems that will operate despite extremely low temperatures that preclude the use of ordinary facilities.

Living and recreational quarters must be as cheerful and comfortable as possible for men living un-

Narrow opening at top of trench is spanned by metal forms that are covered with snow which hardens to form an arched ceiling.





Nuclear power will replace costly fuel for kitchen such as this installed at Site II in test of capabilities for undersnow living.

### **Arctic Distance Meter**

A distance-measuring device which may help arctic area explorers to pinpoint their location in snowy wastelands has been developed and will be tested on the Greenland Ice Cap this summer. Known as an attenuation meter the device is a much smaller version of an earlier model developed by the Scripps Institute, University of California. It measures the tricky atmospheric conditions which affect visibility and produce optical illusions which distort the size and shape of objects, making it difficult to gauge visually the distance from one location to another. Two highly sensitive photoelectric circuits measure the length of the path between the observer and the horizon, in which a selected point becomes invisible due to diffusion of light in the air.

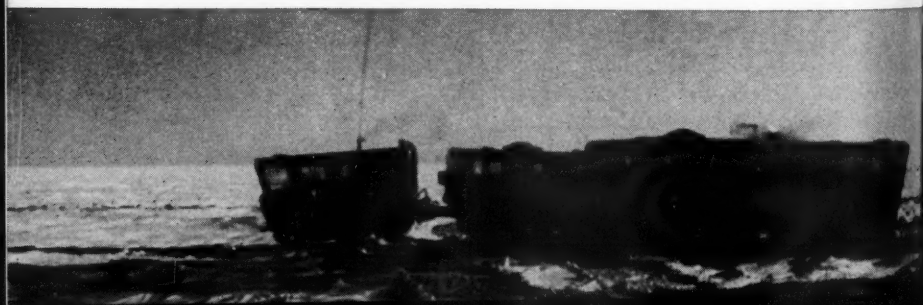
derground and in extreme isolation during the long Arctic winter night. Health, too, is important, and a 10-bed modern hospital complete with operating room is being installed. Compared to the austere camp at Site II, Camp Century would be considered "plush."

### **Nuclear Power Supply**

ARMY Engineers for many years have considered the problems of supplying heat and power for remote military installations. At 70 degrees below, failure of power and heat could be disastrous to the inhabitants whether on surface or under the snow.

Success or failure of such an undertaking, it was recognized, hinges on provision of an appropriate fuel source—desirably, a nuclear power plant which could be prefabricated in the United States, flown to the site and assembled. In 1957 an experimental nuclear power plant had been put in operation at Fort Belvoir; its success demonstrated that such a project was both practical and dependable. Accordingly, a contract for prefabricated construction of a plant which would generate about 1,500 KW was awarded to Alco Products, Inc., Schenectady, New York—the firm which built the Fort Belvoir prototype plant. Installation of the plant

Preparing to continue work on Camp Century, Engineer troops returned this spring to find project in good condition following severe Arctic winter.



at Camp Century was scheduled to begin in July.

Part of the undersnow installation was expected to be habitable before the end of the 1960 summer season. By that time—usually mid or late September, depending upon the weather rather than the calendar—the prefabricated nuclear power reactor will have been installed and should be undergoing its final tests.

Availability of nuclear power will solve a tremendous logistics problem in the transporting of fuel. Peacetime costs for fuel oil delivered to Greenland have been estimated as high as \$42 a barrel. The cost of flying a core of atomic fuel, enough to operate such a plant on the Ice Cap for a year or more, would be negligible compared to that of conventional fuel.

### Construction Methods

LARGELY under the leadership of scientists of the U. S. Army Snow, Ice and Permafrost Research Establishment at Wilmette, Illinois, special construction equipment, techniques and materials have been developed for the unique project. To cut the tunnels, SIPRE introduced the Peter Snow Miller, a plow used to keep open passes in the Swiss Alps. The equipment was altered and adapted to cut trenches needed

### Far North Trail Blazers

As part of an over-all program to develop techniques for transportation support operations in difficult environments, Project Lead Dog is underway this summer on the Greenland Ice Cap. A special Army task force left Camp Tuto near Thule, Greenland, in May on an 1800-mile expedition to establish two safe overland routes from the crest of the ice cap to the ice-free coast of Northeast Greenland, moving both by air and on the surface. A 30-man Transportation Corps task force is crossing the ice cap from Camp Tuto to Crown Prince Christian Land, retracing a portion of the route and then proceeding straight north to Peary Land.

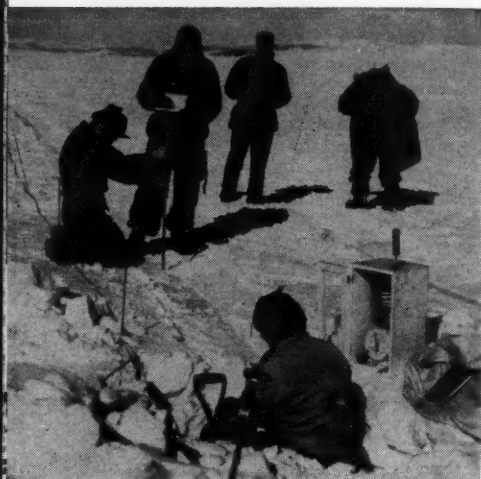
On the trek, the party will utilize helicopters, weasels, tractors, sleds, 10-ton off-road trailers, wannigans and rolling liquid transporters. Scientists of the Chemical Corps, Medical Corps, Signal Corps, Quartermaster Corps, Engineer Corps and the Air Force Cambridge Research Center will make meteorological, glacial and other observations.

for the undersnow buildings.

An improved technique for cutting trenches was devised. A series of cuts, each successively lower and wider, provide trench walls resembling an inverted V with steps. The narrow opening at the top is then

Chimneys rise above snow that had drifted around buildings when Army scientists returned to Camp Century.





Into a 205-foot hole at Camp Tuto goes a 25-foot section of plastic tubing to hold inclinometer to measure shift in ice cap.

covered by special semicircular metal forms over which snow is blown by the machine. When the processed snow has hardened, the forms are removed and only the roof of hardened snow remains to form an arched ceiling.

### Arctic Advances

IN six summers in Greenland, the Corps of Engineers has developed numerous other devices and techniques for coping with Arctic problems. Machinery and methods of compacting ice and snow for runways that will accommodate the heaviest cargo planes make airfields on the Ice Cap feasible. Electronic and infrared instruments make possible the detection of dangerous crevasses under the snow. Still other equipment has been devised for filling and bridging these crevasses. Vehicles using electronic detectors follow trails previously laid out to insure safe passage of snow trains

### Glacier Water Source

A system that provides large quantities of drinking water in glacier regions by utilizing live steam has been developed by the Engineer Research and Development Laboratories, Fort Belvoir, Virginia, and has been put into use at Camp Century, the under-surface project in Greenland.

Basically, the system involves use of steam to melt a hole three to four feet in diameter into the dense glacier ice layers. With continued melting a bell-shaped cavity is formed and the water produced is pooled far below the surface, then is pumped to the surface as needed.

At Camp Century a 42-inch diameter hole was sunk to 140 feet in about 30 hours of melting time, after which the ice was melted for nearly 300 hours and a cavity some 40 feet in diameter and 50 feet deep was formed. From this cavity 110,000 gallons of water were pumped to the surface at a rate of 8,400 gallons a day. The hole was later found to be 172 feet deep.

over the treacherous terrain, often impassable by ordinary means because of the "white-outs" of blowing snow.

In the solid ice at the edge of the Ice Cap a short distance from Camp Tuto, Engineers have carved out under-ice tunnels and rooms which are suitable for year-around living and storage, using an automatic coal-cutting machine which removes its own ice cuttings on a continuous conveyor belt. This technique offers a rapid and economical way of utilizing the solid ice pack for living and working quarters a hundred feet below the surface, safe from atomic or other explosions.

With temperatures ranging from 10 to 15 degrees above zero winter



and summer, these ice caverns are natural refrigerators for food. Tools and machines can be stored without danger of rust because of the low humidity, and gasoline has been stored satisfactorily for an entire winter in an unlined ice reservoir chipped out of a cavern floor. In fact, tests six months later showed that gasoline so stored contained less moisture than when initially poured into the ice reservoir.

Camp Century might not have even entered the idea stage without the knowledge gained by the Corps in studies begun more than sixteen years ago, of methods of design and construction of military bases in cold regions. (See "Conquering the Arctic," July 1955 DIGEST.) Intended to be a working field laboratory and test camp for the scientists and engineers seeking to unlock the secrets of the Arctic, Camp Century also will provide invaluable knowledge of what it takes to build an operational installation for troops in the high Arctic in the event of

an emergency or actual hostilities.

When completed, Camp Century will be a highly efficient undersnow installation capable of housing 100 men summer and winter. Here researchers for the Corps of Engineers and other technical services—including Transportation, Signal, Quartermaster, Chemical, Ordnance and Medical Corps—will be able to carry on coordinated programs and studies in vehicular transportation, meteorology and communications, food, clothing, health and well-being in the extreme polar environment.

Their combined labors are designed to create in the bleak polar wasteland, explored only by the most rugged adventurers, a state of development which will permit refined and efficient operations by large groups of scientists and researchers working cooperatively. It will be another pioneering outpost in man's efforts to conquer one of the most challenging of the earth's last frontiers.

An asteriodome is assembled to make measurements in support of a meteorological project conducted by team from Army Electronic Proving Ground, Fort Huachuca.




*A survey of U. S. Army officer educational levels  
reveals a high coefficient of*

# Brainpower



# and Manpower

## Colonel Jackson E. Shirley



**J**UST after World War II, a professor of international relations at Princeton said of a young Army lieutenant colonel: "He is one of the very best students the university has had in recent years."

Today that former graduate student, now Brig. Gen. Andrew J. Goodpaster, is stationed in the White House, a presidential aide.

He is one of the prime examples of the increasing number of scholar-warriors in positions of leadership in the United States Army.

Another outstanding example, one of many available in college files, is Lt. Col. Elliott G. Cutler, who, while a doctoral candidate at

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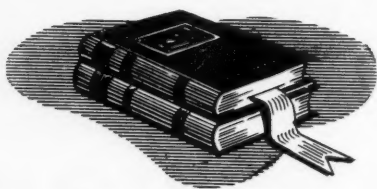
**COLONEL JACKSON E. SHIRLEY**, *General Staff, is Chief, Technical Liaison Office, in the Office of the Chief of Research and Development, Department of the Army.*

Georgia Tech, was the subject of an enthusiastic letter to the Army from the director of the School of Electrical Engineering.

**THE** Army's commissioned officers are, in fact, among the Nation's most highly educated groups. More than 55 percent of them hold at least one college degree. All told, nearly 90 percent have had some time in university classrooms and laboratories.

Their educational level is about equal to that of their civilian counterparts—business executives and managers.

Foreshadowing a continuing upward trend in officer educational levels is the fact that almost four out of every five of the Army's lieutenants are college graduates.



THE United States Army today is deeply rooted in educational pursuits—in scientific and medical research as well as civil and business functions. Economics, law, psychology, diplomacy, public relations, and politics are represented in its enormous range of activities.

The Army's increased dependence on civilian schooling began soon after Japan's surrender, as it became apparent that the world was on the threshold of scientific, social, economic, and political upheavals. The Army foresaw that military and technical training alone would not give its officers the means to cope effectively with the coming problems, at home and abroad.

As in the other Armed Services, the Army's functions were expanding into nearly every niche of learning known to man. Concentrated education—and plenty of it—was perceived as standard equipment for the officer of the future.

### **Degree Holders**

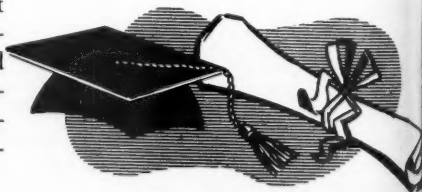
A RECENT inventory of Army officer education revealed that of some 90,000 officers, 298 possess doctorates, 5,138 master's degrees, and 7,261 professional degrees. The professionals include physicians, dentists, lawyers, clergymen, veterinarians, and civil engineers.

There were 36,911 officers with bachelor's degrees, of whom 2,099 took postgraduate work without obtaining advanced degrees. Some 28,643 went to college but did not complete their bachelor's requirements. Another 9,219 had high school diplomas. Only 414 never finished high school.

A second survey tabulated major fields of college study. In preparation for their myriad Army duties, roughly 7,100 officer-graduates studied engineering or architecture, 9,300 social sciences, 8,000 medical sciences, 1,200 biological sciences, 1,900 law, 8,000 business, 3,700 fine or liberal arts, 2,300 agriculture or forestry, and 8,900 physical sciences.

About 7,400 officers are West Point graduates. Of these, 2,200 have also taken advanced civilian degrees. The remaining 5,200 are included in the over-all figure for physical sciences.

Officer education takes in an amazing collection of subjects—and the Army has uses for every one of them, including some seemingly unlikely ones. Eight officers, at the time of the survey, had degrees in fish resources, 2 in sugar technology, 26 in poultry husbandry, 41 in dramatics, 8 in marine engineering, 3



in oceanography, 20 in anthropology, 4 in archeology, 42 in home economics, and 122 in textile engineering. All these obtained their degrees in civilian life before entering the Army. The Army even has in its ranks six graduates of the United States Naval Academy.

### Civil Schooling Opportunities

ALTHOUGH a majority of these men were commissioned after graduation from civilian or service schools, a considerable number

furthered their education while in the Army. There are two ways to obtain civil schooling in service:

- First, the Army encourages officers (and enlisted members) to take courses at civilian universities during off-duty hours. Individuals are provided with up to 75 percent of their tuition. In order to permit them to satisfy the normal residence requirements for a degree, qualified persons are given temporary duty at a school of their choice for their final semester. They con-

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### Universities Participating in the Army Civil Schooling Program

#### FIRST ARMY AREA:

Babson Institute  
Columbia University  
Cornell University  
Harvard University  
Lowell Technological Institute  
Massachusetts Institute of Technology  
New York University  
Princeton University  
RCA Institutes, Inc. (School of TV & Electronic Technology)  
Rensselaer Polytechnic Institute  
Rutgers University  
Springfield College  
Stevens Institute of Tech.  
Syracuse University  
Tufts University  
Yale University

#### SECOND ARMY AREA:

Johns Hopkins University  
Lehigh University  
Ohio State University  
University of Pennsylvania  
Virginia Polytechnic Institute  
University of Virginia  
Western Reserve University

#### THIRD ARMY AREA:

University of Alabama  
University of Alabama (Huntsville Extension Center)  
Alabama Polytechnic Institute  
Florida State University  
University of Florida  
University of Georgia  
Georgia Institute of Technology  
Mississippi State University  
University of Mississippi  
North Carolina State College  
University of North Carolina  
University of Tennessee  
Vanderbilt University

#### FOURTH ARMY AREA:

University of Houston  
Louisiana State University  
New Mexico College of A&M  
University of Oklahoma  
University of Texas  
Texas A&M  
Tulane University

#### FIFTH ARMY AREA:

University of Chicago  
University of Illinois  
Indiana University  
Iowa State College  
University of Kansas  
Menninger Foundation  
University of Michigan  
Michigan State College  
Missouri School of Mines  
Northwestern University  
Purdue University  
University of Wisconsin

#### SIXTH ARMY AREA:

University of Arizona  
University of Southern California  
Stanford University  
University of Utah  
University of Washington  
University of Wyoming

#### MDW AREA:

American University  
Georgetown University  
George Washington University  
University of Maryland

#### FOREIGN INSTITUTIONS:

University of Heidelberg    Oxford University, England  
Middlebury College — University of Paris  
University of Madrid Branch    University College, Dublin



## **Brainpower and Manpower**

tinue to receive normal pay and allowances, but must meet their own schooling costs.

- Second, under the Army Civil Schooling Program, qualified volunteers are sent to accredited American or foreign universities for full-time postgraduate work on duty time. They usually remain at school for periods up to two years, and on rare occasions more than three years for doctoral studies. At present the Army has students in 65 American and five foreign universities. (See box.)

Army Regulations 621-5 currently allows up to 200 officers to be in

attendance at civilian schools at any one time. Of these, up to 50 may be seeking completion of requirements for advanced degrees.

Since its inception in 1946, the Civil Schooling Program has enabled more than 4,900 officers to attain master's, doctoral, and second bachelor's degrees. Slightly more than half of them are prior graduates of West Point.

Generally, the universities regard the program as valuable to both the Army and themselves. They admit the Army students on the same basis as civilian applicants.

Upon completing studies under

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## **Army Fellowships Awarded For Advanced Study and Research**

MORE than half the applications—54 out of 105—made by Army civilian employees since 1956 under the Secretary of the Army's Research and Study Fellowship Program have been approved to date, according to a report by Dr. E. G. Witting, Deputy Director of Army Research and Development, at the ninth meeting of key Army scientists at Brooke Army Medical Center, Fort Sam Houston, Texas.

The Army Research and Study Fellowship Program was inaugurated in 1956 by Secretary of the Army Wilber M. Brucker following a study of the disposition of applications for the Rockefeller Public Service Awards—a program which had been operative since 1951.

It was found that members of the Army screening committee were experiencing difficulty in deciding from among the group of applicants those who could be selected for sponsorship. Many qualified Army applicants had excellent proposals for study in various

fields of endeavor. The limited number of Rockefeller Awards granted each year, however, pointed up the need for the Army to provide additional career development opportunities for these worthwhile Army candidates.

Accordingly, in 1956, on recommendation of the Secretary of the Army Executive and Professional Development Committee, consisting of the Deputy Assistant Secretaries of the Army and representatives of the Chief of Staff, a group of awards was established by the Secretary of the Army to foster advancement of the professional status of Army civilian employees, incorporating off-the-job development opportunities found so effective in the Rockefeller awards program. About \$200,000 was appropriated the first year for these awards.

Intent of the program is to give recipients the opportunity to spend from six to twelve months in full-time research or study on problems they had identified. Such study could be in resi-

the Program, the men are assigned to three-year tours utilizing their newly acquired knowledge. Then many are returned to their branches — Infantry, Artillery, Armor, Signal, Transportation — where they resume normal career patterns.

However, a large number of intensively educated officers may volunteer to have their career patterns altered to fit the Army's needs in special programs, such as Research and Development (R&D), Atomic Energy, Logistics, and Civil Affairs. But even here, in most cases the men are not entirely relieved of branch obligations. For every three

years at specialty assignments, they normally spend up to two years with the branches.

The officer's primary function is to be prepared at any time to lead men under battle conditions. Repeated return to duty in the branches keeps officers ready for sudden calls to action.

Today's Army has the responsibility of continually modernizing and developing itself toward the peak efficiency it must have to meet future emergencies. Since this task takes in almost every field of human endeavor, college education is a hallmark of today's Army officer.

dence at an institution of higher learning of the individual's choice, in this country or abroad, or at a comparable educational or research activity. One award recipient performs most of his studies in his own home laboratory, with visits to others in the United States and Europe.

Because of legal restrictions, fellows cannot be paid a stipend in addition to salaries; therefore, all salaries are paid from funds available at the home Army activity. The fellowship pays for travel, tuition, special equipment where needed, and living expenses while travelling.

In the United States, work has been carried out by Army fellows at Stanford University, Massachusetts Institute of Technology, University of California, University of Maryland, Illinois Institute of Technology, Northwestern University Medical School, Columbia University and several others. Study and research have been performed in Europe at Neils Bohr Institute, Copenhagen; Cambridge University; University of Birmingham; University of Heidelberg; Carlsberg Laboratory Polytechnic Institute, Copenhagen, and several others.

Most of the fellowships have been awarded to civilians in Grade GS-13, but grades have ranged from 11 to 15. No minimum educational requirements enter into the criteria for application. The majority of recipients, however, have had one or more college degrees and the fellowship study has been carried on at the graduate level.

In considering applications, the Executive and Professional Development Committee stresses the proposed study program and the applicant's suggested method of prosecution. It is desirable that all echelons review and screen proposals without injecting any features which destroy the author's originality. The main purpose of the fellowship is to advance the fellow.

Currently every effort is being made to make the program better known to commanders and managers Army-wide in order to insure the widest possible participation by all Army civilians who could benefit by the fellowship program.

It is essential that all applicants and their proposed study projects have command indorsement and that full utilization be made of the newly acquired skills and knowledge upon the employee's return to duty.

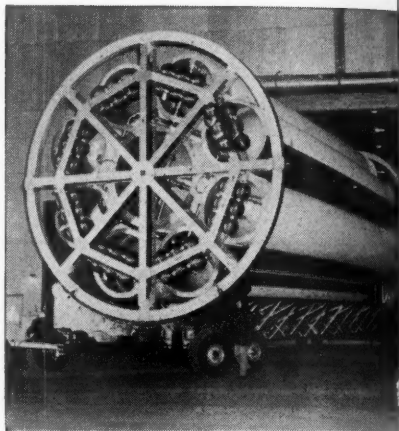
# Saturn Set For Static Firing

IN PREPARATION for full-scale launching by 1964-65, the first static test firing of the gigantic Saturn was staged recently at the Army Ballistic Missile Agency facilities, Huntsville, Alabama. The main stage, packing eight rockets, generates 1.5 million pounds of thrust while the upper stages will generate about 400,000 pounds more. With its two upper stages, the launch vehicle will stand 150 feet high. Powered by a mixture of gases that can be liquidized at low temperatures, it will be capable of carrying 15-ton payloads.

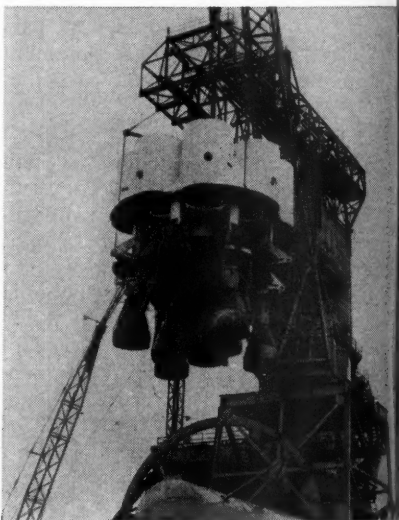
Eventually Saturn will be able to send several men on a trip around the moon and even place them in orbit about the earth's satellite before returning them to earth. Saturn development now is continuing under technical responsibility of the National Aeronautics and Space Administration.

Following static tests, the vehicle will be test-fired from the Atlantic Missile Range, Cape Canaveral, Florida, where a 305-foot self-propelled service stand will be built to handle the huge rocket. A special system employing parachutes and retro-rockets is being developed to enable recovery of the first stage unit for post-flight inspection and possible further use.

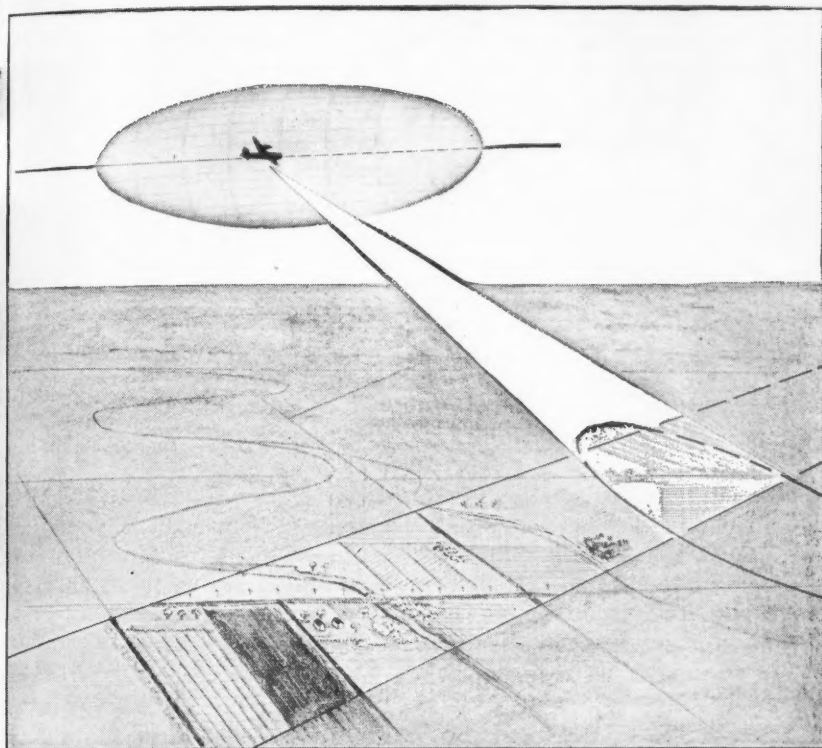
Over 600,000 pounds of thrust was developed when four of eight engines of Saturn space booster were static fired during brief test.



First Saturn booster leaves assembly shop at Army Ballistic Missile Agency where it is being developed under Army management.



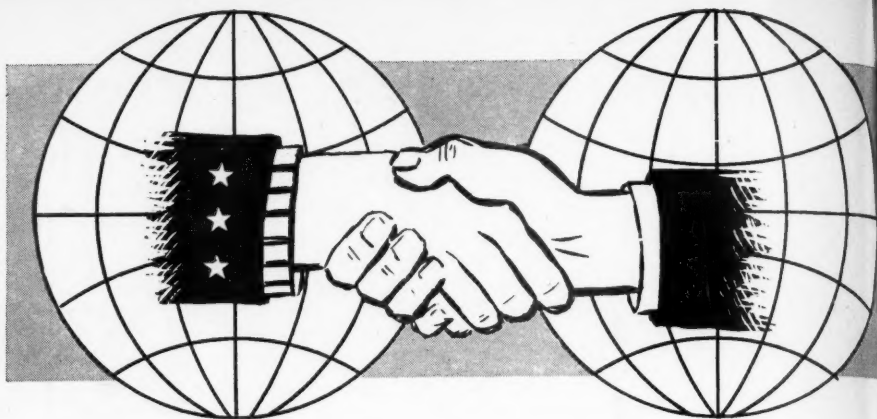
# Airborne Radar System



REGARDED as an important step in providing improved combat intelligence to a field army, an airborne radar system that outperforms the human eye in separating objects at great distances has been unveiled by the Army. The system not only can pick out distant objects which merge together when seen by the human eye, but can make photographs of what it sees. The new radar photography system, designated the AN/UPD-1, with its side-looking operation, scans enemy territory at right angles to an aircraft's direction of flight, then produces map-like photos for intelligence study. Objects which are near to each other, such as vehicles, can be picked out at

ranges greater than previously possible.

A day-and-night, all-weather system, it can probe enemy territory without flying over a hostile area. Using a small antenna, the system gathers fine radar map detail by "synthesizing" side-looking antennas many times longer than the aircraft. The complete system includes the airborne radar equipment in an L-23 aircraft, and a mobile ground van which converts and processes the intelligence. The system was developed by the University of Michigan's Willow Run Laboratories in cooperation with the U. S. Army Signal Corps. The airborne portion was built by Texas Instruments Incorporated, Dallas, Texas.



## FOREWORD

**I**N 1956 President Eisenhower called on the American people to support his newly announced People-to-People Program, aimed at increasing understanding between Americans and people of other lands. To carry out the program, forty committees representing various facets of American life were organized. Among these was the Armed Services People-to-People Committee. Its objectives: to give the people of other countries a better understanding of the American people and way of life—their customs, traditions, peaceful aspirations and devotion to freedom.

This program found fertile ground and favorable climate in the Army, which has long recognized the value of mutual good-will in carrying out its missions in support of Free World security. In the period since World War II, the Army has continuously stressed the fact that United States soldiers, dependents and civilian employees at overseas stations have unparalleled

opportunity to serve as good-will ambassadors—that by their actions, attitude and example, they can help immeasurably to advance the Free World cause.

Now they were asked to translate the President's People-to-People Program into the universal language of human good-neighborliness.

How has this effort fared?

What forms does it take?

What problems are being encountered—and how are they being resolved?

To survey the scope of Army community relations in a critical area on the front lines of the Free World, ARMY INFORMATION DIGEST obtained the following on-the-scene accounts from Germany, France, Italy as typical examples of recent activities supporting the People-to-People Program. Together, they constitute a reassuring

***Report from the Field***





**Report from Germany where**

## **Community Relations Is Everybody's Business**

**Colonel Morton P. Brooks**

**T**HE United States Army has been in West Germany approximately fifteen years. This period has witnessed some important changes in West German-American relations. Today West Germany is sovereign. It is a member of the NATO community which is now a thriving ten-year-old organization. The country itself has prospered far beyond the expectations

of those who saw it at the end of World War II.

It is no exaggeration to say that German-American relations, too, are better now than ever before. This can be attributed, in a large degree, to the events which made it necessary for Germans and Americans to stand shoulder to shoulder in defense of their liberties.

Providing a dramatic contrast with the free way of life is adjoining East Germany under Communist rule. The

**COLONEL MORTON P. BROOKS, General Staff, is Chief, Information Division, Headquarters, United States Army Europe.**



The U.S. soldier abroad is always in the spotlight as the Nation's representative and good-will ambassador.

United States and its western European allies have striven steadfastly for a unified Germany with free elections, but these efforts have been repeatedly blocked. The East German people continue to flee into West Germany to escape the miseries of Communism.

In the shadow of the Iron Curtain, Americans and Germans have been drawn closer together, not only politically, but in their shared outlook on the necessity for freedom.

As far as the United States Army in Europe is concerned, making friends and defending the Free World go hand in hand. For here in Europe, as elsewhere throughout the world, wherever United States troops are stationed, Community Relations is a command responsibility. This means that the work of cultivating good relations is not delegated to a few specialists but is the responsibility of every commander and every man under him—and their families as well.

Giving form and direction to this effort, the Army conducts a well-organized Community Relations Program.

This program rests on three foundations. First and foremost is Troop Information which includes, but is not limited to, the training of Army personnel for service abroad. Second is the command-wide Public Information effort, and third is what may be called the People-to-People program.

### **Ambassadors at Large**

HOW do we go about making friends with our German hosts? How are we creating good community relations?

More than ever before, United States troops are demonstrating an interest in the Germans. Many of them are learning to speak German and are showing respect for, and knowledge of, their customs, history and traditions.

It is not hard for U. S. soldiers, their dependents and Department of the Army civilians to demonstrate that they are an asset to the community in which they live. Enlisted men are "good will ambassadors" who go right down to the grass roots with the USAREUR story. They live in the midst of the German community and

in the process of making friends, they contribute to the outstanding community relations program that is evident in Germany.

On the formal, official level, Army representatives sit down with local officials to eliminate sources of misunderstanding before they reach the "international incident" stage. By such "preventive-minded" thinking, German-American groups anticipate trouble spots and take corrective action.

When a unit or community problem begins to appear, these groups go into action. The most frequently used methods are German-American Advisory Councils, German and American radio and press media, and appropriate topics in the Troop Information Program. Prompt action smother the spark before it becomes a blaze.

### **Troop Information Program**

BEFORE departing for Germany, United States personnel are given instructions in the customs and traditions of their new host country. The benefits of this instruction are readily apparent. A genuine interest in the German way of life becomes the basis for a wholesome relationship; and the American who shows an interest in German tradition and culture is well received.

The greatest part of troop and dependent orientation is accomplished, however, after arrival in Europe. Every soldier participates weekly in troop information training in which the importance of personal behavior is stressed. Armed Forces news media such as *Stars and Stripes*, the American Forces Network and unit newspapers are used to acquaint personnel and their dependents with the importance of good community relations, the traditions and culture of Germany, and the like.

No training program would be complete without language training, and naturally this is one of the aims in troop instruction. Many must start from scratch. Some 9,000 persons are

enrolled annually in German language courses. Language instruction is also provided in the dependent schools, where approximately 27,000 students are enrolled.

### **Public Information Aspects**

ARMY policy with regard to public information is prescribed by Army Regulations. The basic principle of press relations—to release all information on subjects which do not jeopardize military security—is the prevailing practice in the United States or wherever the Army is stationed on foreign soil. This policy is effective; it gains the confidence of the press, and presents an undistorted picture of the U. S. Army, its aims and policies.

Relations with local news media are kept on a friendly and continuous basis. Frequent visits of newsmen to U. S. installations are stressed as a means of familiarizing the West German public with the human side of the U. S. Army, as well as its NATO role.

Only a few German citizens still harbor some misconceptions of the U. S. Army, its soldiers and their dependents. Not many years ago we were an occupation army—the victor in a conquered land. Today we are allies in building a strong defense against the threat of Communism.

### **THE SOLDIER AND THE COMMUNITY**

"I am convinced that no other single non-military activity of ours can contribute more to the success of our mission than the development of good sound community relations. It is a subject of intense interest to me personally."

**General Clyde D. Eddleman**  
Commander in Chief,  
U. S. Army Europe



A request by Sp 5 Alan Adams, Seventh Army signal clerk, for "a few" Christmas presents for a German orphanage brought a landslide of gifts.

Since it is impossible for every German citizen to have personal contact with Americans, it is necessary that Public Information use mass communication media in telling the U. S. Army story to the German people. This effort is a major objective in the Community Relations Program in Europe.

### People-to-People Program

ON 11 September 1956, President Eisenhower called a meeting of leading U. S. citizens to discuss ways and means of increasing understanding among peoples. The resulting People-to-People Program, launched to develop contacts between the U. S. Army and the people of Western Europe, is the basis for the present Army Community Relations Program.

Objectives of the Program are advanced by 52 German-American Advis-

ory Councils operating in German communities where United States troops are stationed. These councils bring together the mayor, civic officials, U. S. Army commanders and staff officers, to discuss such matters as traffic problems, damage claims arising from maneuvers, and discipline of troops. From their origin as "complaint" boards (a function they still maintain) the councils have developed into a sort of German-American friendship club, or center for community relations activities.

In addition, there are Land or State Councils attended by Minister Presidents and major U. S. commanders where matters of a more general and official nature affecting the U. S. Forces are discussed.

A wide variety of social, cultural and sports activities developed through the councils and the Federation of German-American Clubs are conducted throughout Germany, wherever U. S. personnel are stationed. The Federation, devoted to the furthering of German-American relations, is composed of 38 member clubs, representing a total membership of approximately 5,000 American and German men and women.

Perhaps the biggest event of the year sponsored by the Federation is German-American Friendship Week, held annually in May. Receptions, sports competitions, band concerts, open houses, military parades, tree plantings, youth dances, Boy Scout jamborees and joint religious services highlight the week.

The German populace is generally aware of the spontaneous generosity shown by Americans for orphans and old people—a manifestation which reaches its height during the Christmas season. This is a tradition which has existed in America and follows the soldier wherever he goes. The U. S. soldier contributes more than \$150,000 to West German charitable organizations annually.

Another area of personal contact is the school interchange, in which cooperating United States dependent schools

and German schools temporarily exchange teachers and students.

Another important area of contact is in the field of employment. An estimated 105,000 Germans work for some branch of the U. S. Army in Germany. Together with their families, they play an important part in German-American relations.

To be truly genuine, friendship must be reciprocal. The expressed American desire to arrive at closer comprehension and personal contact is usually matched by our German hosts. For example, the dedicated work of the *Atlantik Bruecke* (Atlantic Bridge)—a nonprofit, nonpolitical organization dedicated to improving relations between Germans and Americans—has been of real assistance. The publication "*Meet Germany*," and invitations to American soldiers at Christmastime are examples of these activities.

### Emergency Assistance

IN THE spring of 1956 the town of Schramberg in southern Germany was hit by a flash flood which swept through the town, carrying large boulders into the center of the city. Power was cut off and water mains were destroyed.

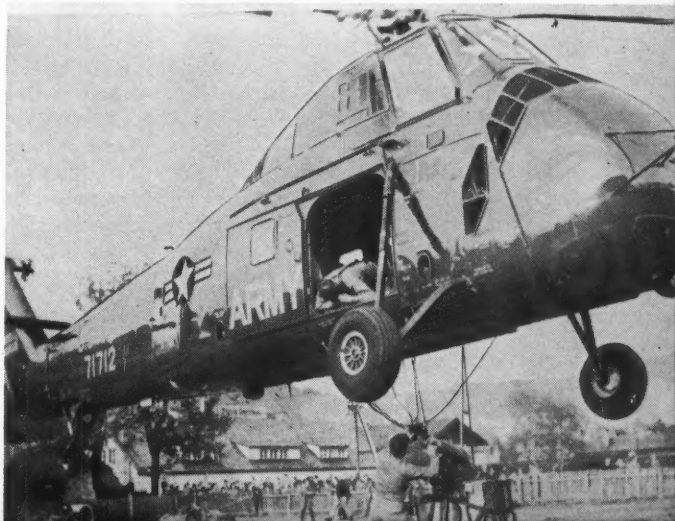
A call for help went out to the U. S. Army. Within four hours, Army representatives had established a water purification point for the inhabitants. The

German Army sent a battalion of troops to do the pick and shovel work. The U. S. Army sent an Engineer detachment with bulldozers, front-end loaders and cranes. The French Army brought in two hundred men. The Germans provided diesel oil for the U. S. equipment as well as rations and billets for the troops.

Such cooperation among Americans, allied forces and the citizenry of host countries is a basic fact of the NATO alliance of free peoples. With the development of the *Bundeswehr* (German Army), United States community relations activities in Germany are taking on more and more the character of a NATO community project. Contacts between the *Bundeswehr* and the U. S. Army, both social and military, are growing day by day. The original impression of the U. S. Army as an occupier has given way to the image of the United States as a "NATO Ally." This is as it should be.

Today, as the Western World faces the menace of Communism, it is imperative that Germans and Americans be friends. Under the guiding influence of the Community Relations Program, U. S. Army members and their families at every echelon are increasingly aware that only by cooperation and friendship can each make an everlasting contribution to world peace.

U.S. Army helicopters haul in items for construction of Red Cross hut in mountain regions of Bavaria.



AUGUST 1960





**Report from Italy where**

# SETAF is a Friendly Word

**Dr. Enzo Stanghellini**

**I**N THE autumn of 1955 a foreign army quietly crossed the Italian Alps from Austria and headed for the Po Valley and Tuscany. The Brenner Pass, through which had passed victorious Roman legions, which had long been the invasion route for invading armies, had never seen anything quite like this before. The small but highly mobile army with its powerful machines seemed to be truly an "army of the future" as, carrying out terms of a peace treaty with Austria, they rolled into Italian territory to form a unit new in concept, structure and mission—the United States Army Southern European Task Force (SETAF).

Thus for the first time in modern history a foreign army in full war regalia entered Italy as a "guest" in time of peace and on the express invitation of the Italian Government. From that day forth, the word "guest" was used, and soon it became "welcome guest" in the Italian press.

A month after their arrival, the U. S. soldiers were established in Verona and

*DR. ENZO STANGHELLINI is an Italian citizen employed as a Community Relations Advisor in Information Division, Headquarters, Southern European Task Force. The author here looks at community relations in Italy from the viewpoint of the host country.*

Vicenza in the Veneto Region of Northern Italy, and in Camp Darby on the Mediterranean. On 25 October 1955 SETAF was officially born at a solemn ceremony at Caserma Ederle in Vicenza. The NATO "shield" in Italy was forged and integrated with Allied Land Force Southern Europe under command of the Italian General Maurizio Lazzaro de Castiglioni with headquarters in Verona. (See "SETAF—Pilot Organization for the Future," July 1958 DIGEST.)

While SETAF with its missiles and ultra-modern organization was fulfilling a very important military function as a deterrent against aggression, at the same time it literally transformed its Italian ally into friends by the behavior and actions of its soldiery, which earned it the amity and faith of the Italian public.

This is especially remarkable in view of the fact that Italy has the strongest Communist Party in the West (22.7 percent of the seats in Parliament). Yet three Italian cities developed a new sentiment of human understanding, friendship and international solidarity which resulted in a sincere and efficient collaboration between Italy and the United States—to an extent probably unsurpassed in any other nation.

This goodwill was made possible because SETAF developed into more than just a military unit. It became a real civil community with U. S. *caser-mas* in Italy as its fulcrum. Families of Americans lived for the most part scattered among the Italian population and blended with it. They made friends quickly and sent their children out to play with Italian children. Young Americans learned the language—even the regional dialects—thus assimilating local customs and traits. They formed the core of personal “people-to-people” relationships, a family affairs bond, which appealed to Italian families.

Some friction at the beginning was caused by traffic accidents and minor brawls between soldiers and Italians in bars and cafes. There was also some resentment—especially in Vicenza—on the part of some elements of the public over increase of rents and other commodities which were blamed, rightly or wrongly, upon the Americans. Some people believed that the Americans preferred to live isolated from the Italian population.

Most of the misunderstanding disappeared rather quickly when traffic accidents were reduced and troop behavior improved to the point that brawls became the exception. But the charge of “isolation” was a stubborn one which took longer to dispel. To solve this required all of the efforts of the Command, particularly the community relations branches of SETAF.

Italian newspapers and other information media were supplied with every possible bit of information on the life of the American community. Newspaper tone constantly was favorable; the impact on the public encouraging; and frequently national dailies, magazines and TV networks illustrated these “new and interesting” aspects of SETAF community life. This aroused an interest by Italians which ranged beyond SETAF to the United States.

### Image of U. S. Life

SOON SETAF soldiers came to be known as good ambassadors of their country in Italy, and ambassadors of Italy to the United States through their letters, conversation and in many facets of their life in Italy. The Italians learned to know about America from the soldier in the community. This mirror of the United States imperceptibly penetrated the thinking and emotionalism of the Italian public, resulting in a certain amount of Americanism which has now dug roots in Italian soil.

The acclimatization of the Americans in Italy is all the more remarkable in that Verona and Vicenza are among the least inclined toward novelty. They are notorious as being the most conservative regions of the country and not traditionally expansive. Leghorn, under Communist administration, certainly is not motivated politically to act as host to an American community.

Adult Sunday School of Verona Military Post brings gifts to orphanage near Torino while at right, Col. Frank P. Vita, SETAF surgeon, gets bouquet from grateful citizens of tiny Republic of San Marino for emergency shipment of polio vaccine.



## **SETAF Is a Friendly Word**

But the two northern Italian cities also are known for their hospitality, and the Veneto people pride themselves on a tradition of culture. The dominant characteristics of the people, particularly of the leading and upper middle classes, lie in an agricultural heritage. The city and lower classes follow the lead of the civic leaders and love music and the arts, but mainly on the local provincial level. Conservative, with roots dug way in the past, and very Catholic are the main traits of the northern Italians in the Veneto region.

That was the psychological and intellectual atmosphere to which SETAF personnel had to become accustomed and respond. The Americans did respond. Lawyers of the Staff Judge Advocate's Office invited their Italian colleagues to discuss questions of law; the Provost Marshal invited the chiefs of police, city law enforcement officials and traffic police, Finance Guards and Carabinieri officers to discuss police matters; American doctors met Italian physicians; SETAF and Italian dentists became acquainted; U. S. Army soldiers, dependents and civilians ex-

hibited their paintings, photographs and crafts along with works of Italian amateurs; the Service Clubs sponsored Italo-American exhibits, cultural meetings and musical events.

Perhaps the most unusual relationship sprang up in the educational field. Italian students and teachers visited SETAF schools at a constantly increased tempo. Hardly a week went by without groups of Italian students and teachers visiting classes of the elementary school in Verona or the SETAF High School in Vicenza or at Camp Darby.

The Italian press and radio-TV representatives served as communication channels between both peoples. Soon the "Little America" of SETAF came to be regarded as an institution in the Italian community. It has now become difficult for many Italians to think of their city without the Americans. To say "He is from SETAF" has become a little like saying "He is from Brescia, or Siena."

Perhaps the most spontaneous and natural fraternal Italo-American feelings have been demonstrated in the conferral of "honorary citizenship"

### **AMBASSADORS IN UNIFORM**

"While performing their mission of defense, our servicemen have also established splendid community relations in the areas where they are stationed. Indeed, the presence of American military personnel in foreign countries has added very greatly to mutual understanding and international friendship at a very important level—the level of individuals.

"To a very large extent, this development is due to the personal activities of our servicemen and women, acting on their own initiative. It is an impressive fact that, wherever U. S. military personnel have served abroad, they have voluntarily given generously of their time, their energy, and their personal resources to try to make life better for the less fortunate people whom they have encountered . . .

"To a very large proportion of the population of the Free World, the image of the American people—the image which they know from their own personal contacts—is not the bloated figure labeled with dollar marks which Communist propaganda favors. No, it is the men and women in the uniforms of our Army, Navy, Air Force, and Marine Corps who truly represent America."

**General Lyman L. Lemnitzer**  
**Chief of Staff, United States Army**

upon Americans by Italian cities and villages, and honors awarded by the President of Italy, Giovanni Gronchi, to high-ranking officers and civil servants. For example, Major General H. H. Fischer, former Commander of SETAF, is an honorary citizen of Cazano di Tramigna, a small town in Verona province famous for its annual "Cherry Festival." Today the 1,880 inhabitants fondly recall at their festivals their honorary citizen in the United States.

Top members of the Italian Government have had personal, informal and warm dealings with SETAF. Minister of Education Giuseppe Medici presided over a jury to select five winners among SETAF high school students for the best essays on noted Italians, and made the awards at a ceremony in Rome City Hall. Among others, Minister of Sport and Tourism Umberto Tupini, and Senator Giuseppe Caron, former president of the Italian Public Relations Association in Rome, and members of his staff have worked closely with SETAF in many phases of public relations on a national level.

Acceptance of SETAF by the Italian public as an integral part of their city institutions and life reflects the daily "people-to-people" relationships established between individual Americans and Italians. The very nature of SETAF *casermas* located in or near Italian towns, the Americans' day-to-day life in the Italian economy, and the immediate and continuing reciprocity on the part of Americans to Italian friendliness have led to an informal taken-for-granted relationship. This mutual pro-



When winds blew over a 200 pound cross on a 190-foot bell tower in Bergantino, Italy, a SETAF H-34 lifted soldier to secure it.

gram of Italo-American efforts and understanding has been responsible for the psychological changes that have occurred almost unconsciously in the past four years to make SETAF socially and militarily integrated with the Italian public.

This psychological evolution can be summed up in four words—bases, command, guests and community. At first SETAF was termed "U. S. Bases." Then it became known as "U. S. Command." Then gradually the public and press began to label SETAF "American guests." Today the United States Army in Italy is called "Our American Community."

Two American eighth grade students receive awards for essays on Italian artists from Verona's school superintendent.





**Report from France where**

## **Goodwill Gets Results**

**As reported by the staff of  
Information Division,  
USAREUR (Rear) (COMZ)**

**A**LTHOUGH the U. S. Army has been in Germany continuously since the end of World War II, its presence in France today has come about through entirely different circumstances, and the problems of human relationship with the French have been occasioned by those circumstances. How the United States Army through a widespread enlightened program has solved those problems is a study in community relations and people-to-people contacts.

The ordinary French citizen was somewhat taken aback by the rather sudden and—to him, at least—unceremonious return of the U. S. Army only three years after troops had left the country in 1947. Early in November 1950, he saw a thousand technical service troops with 300 trucks and trailers moving into his country from Germany. He saw a rapid buildup, establishment of the Communication Zone headquarters in Orleans, more men and materiel coming into a still war-ravaged country, occupying ruined *casernes*, abandoned airfields or waterlogged areas—all in competition with the reconstruction of France.

It was troubled world conditions, capped by the Berlin airlift in 1948 and the invasion of South Korea in June 1950, that had resulted in the United States concluding an agreement with the French Government on 5 November 1950. Basically this was done to establish a line of communications across Europe as a dependable means of supplying our combat forces in Germany. (See "Delivering the Goods to USAREUR," January 1957 Digest.)

On the official side, a spirit of cordiality and helpfulness marked the attitude of French authorities. But to the individual Frenchman this new "invasion" by a foreign army was something that added to housing shortages, and that promised to complicate his day-to-day life in other ways.

The language barrier helped to compound problems arising from this sudden reentry into France. It appeared that the ill-housed American, bereft of his accustomed community facilities, and his "invaded" French neighbor were fated to live together for some time to come. Unless a community relations program were instituted,



these apparently dissimilar types would find the going rather difficult.

JUST such a program was swiftly put into action. Before the end of 1951, a Troop Relations Committee, sponsored by the French Ministry of National Defense, was formed to examine Franco-American rapport. This body recognized that housing shortages, highway accidents, public disorders and bad debts were major sources of friction. It was reasoned that if both parties could understand each other better, much of the importance attached to minor incidents and accidents would disappear.

To show the French just what the Army was doing in France, U. S. commanders arranged press tours of local installations. Leading citizens and officials were invited to Army social functions. Troops participated in local celebrations. Their initial appearance in 1952 at Orleans' annual Joan of Arc festivities, for example, greatly strengthened pro-American feeling in that city and its surrounding area, the center of COMZ activities.

### Orientation Program

TO SHOW the newly arrived American what the French were like, orientations were conducted at all COMZ installations. From various government agencies, the Army obtained pamphlets and films to assist in explaining France and its people. Troop Information talks were prepared and distributed by COMZ Information Division. These covered French history, customs, travel highlights; and most important, the outlook and attitudes of their French neighbors were explained.

By 1953, on-duty courses in the French language had been instituted. Fully one-third of the command's military personnel were enrolled before the program was a year old.

Simultaneously, all levels of COMZ emphasized cooperation in community affairs. The Verdun Aero Club, which had allowed the U. S. Army use of its



Learning the language of the country fosters good relations while, below, music by the 76th Army Band proves an international language.



Gen. Clyde D. Eddleman, USAREUR Commander, salutes colors at St. Cyr, French Military Academy, after presenting West Point uniform.



## **Goodwill Gets Results**

airfield, was repaid when U. S. Army Engineers regraded and resurfaced the strip. The Transportation Corps loaned a diesel locomotive to the French railways for a six-month test. A geiger counter was rushed to the Orleans Hospital Center to locate a radium needle swallowed by a patient. These and other friendly and helpful acts brought Frenchmen and Americans closer together.

By 1954, it was evident that these contacts, both official and at the grass roots, were bearing fruit, and improvement since then has been continuous. Joint participation in celebrations of both nations became commonplace. United States forces could be found at V-E Day ceremonies throughout France as at Verdun for the anniversary of that great World War I battle, or in Paris to honor Lafayette.

Memorial Day and Armed Forces Day brought increasing numbers of French officials and private citizens to U. S. installations where the French flag flew along with the Stars and Stripes. Statistics speak for themselves:

Armed Forces Day, 1953, was attended by 67,000 Frenchmen. In 1954, nearly 90,000 turned out. The 100,000 mark has been passed in every subsequent year. But even this figure is small compared to the numbers of Frenchmen who have acclaimed U. S. Army bands in every corner of the land. Without a doubt, these Army bandsmen are great public relations assets.

ANOTHER forward step was the hiring of French advisers in community relations. An adviser must possess outstanding reputation, maturity, tact, initiative, and complete knowledge of the French and English languages, and also of France and the United States. Today, there are 14 of these advisers engaged full-time in improving Franco-American relations.

Not the least of the Army's friendly ambassadors are the thousands of French civilian employees hired to perform administrative tasks. Adapting their ways and skills to the Army's requirements, they have taught much in exchange for the instruction given

### **PEOPLE-TO-PEOPLE AMBASSADORS**

"The very fact that so large a part of our Army is stationed overseas has a profound, long-range effect on world peace quite aside from its purely military effect. You will recall that the President initiated a "People-to-People" program to foster understanding among the nations of the world. The importance of the contribution which the Army is making to the advancement of this splendid program could hardly be over-emphasized.

"Our officers and enlisted men who are stationed overseas are truly ambassadors of America. The people of the countries in which they serve see America in the conduct and intimate every-day lives of these, our soldiers. Thus it is that their work takes on an even wider importance than that inherent in their military function. They are bringing living American democracy to people all over the world.

"In the final analysis, peace and progress depend on the growth and fruition of ideals in the hearts of men. The spiritual and intellectual field is the real battleground on which the future of the world will ultimately be decided."

**Wilber M. Brucker**  
Secretary of the Army

them. Although the Army is in a labor market in competition with the growing French economy, it has attracted many faithful French employees. Army efforts to meet them more than half-way have been many times repaid by the friendly words spread throughout their communities. Here good labor relations are good community relations.

### Levels of Cooperation

THE French Liaison Mission, the U. S. Army's official point of contact with the French Government, has taken an active part in promoting understanding between the two peoples. It provides officers to serve as cultural attaches at all major U. S. installations. They work with public relations advisers and U. S. Army staff officers, forming community relations committees to advance Franco-American understanding.

Officially sanctioned contacts continue to take place at an increasing rate. But who can estimate the day-to-day, unofficial associations? Americans live among the French, shop in French stores, stroll with French week-end strollers. On their leaves they go to Paris, the Alps and the Riviera, which attract the 1960 soldier as they did his grandfather in 1918 and his father in 1945.

Any worthy cause finds Americans anxious to assist. Each Christmas season is marked by Americans seeking out orphanages, homes for the aged, hospitals, to provide a bit of cheer and warmth. In most cases, all details of such displays of friendship are arranged by individuals and small units.

Whenever disaster strikes, U. S. Army personnel have responded at once. During the drought of 1959, American troops hauled water to arid areas, then turned to fight forest fires. More recently, the Frejus dam disaster elicited an immediate, voluntary contribution of some \$10,000 from officers and men of the Communications Zone. The stories of such neighborliness are numberless—an irrigation ditch dug by en-



Former President of France Rene Coty greets paratroop officer at ceremonies dedicating a monument to liberators of St. Mere Eglise.

gineers on off-duty time, a bell purchased for a church long without one. Each incident contributes to understanding between the two peoples.

Certainly, the U. S. Army's presence in France is not a bed of roses. Hous-ing is still critical in some areas. Convoys of heavy U. S. Army trucks still disturb Frenchmen. But what matters more is the ever increasing number of individual social exchanges between Frenchmen and Americans. People-to-people contacts keep growing in number, as do Franco-American sporting events.

In the nine years since the U. S. Army's return to France, the Communications Zone has grown into an immense logistical machine capable of supporting all U. S. forces in the European theater. The growth of its operating and support facilities has been more than matched by that of the revitalized French economy.

Along with this prodigious activity, it is gratifying to record the tolerance with which Frenchmen and Americans, intent on their own tasks, have accommodated themselves to each other in a spirit of friendly understanding. Minor incidents doubtless will continue to occur; but the goodwill engendered during the U. S. Army's latest stay in France seems destined to continue its phenomenal growth.

Devastation has another name—

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# more

Captain George L. Robson, Jr.

**C**LAYMORE began as a legend. The ancient inhabitants of Scotland, the Celts, used a fabled weapon called the *claidheamh-mor*, or "great sword." When faced by overwhelming odds, Celtic warriors would stand back-to-back and, using their large two-edged *claidheamh-mors*, they would literally cut the enemy down to size. Even today, officers in Scottish Highland regiments proudly wear the Claymore, a ceremonial version of the ancient weapon.

In the arsenal of today's U. S. Army, the name Claymore has returned to active combat—this time as a revolutionary new weapon. Like the *claidheamh-mors* of old, it has tremendous antipersonnel effect at close quarters.

First of the modern Claymores to be produced in large quantities is the M18 Antipersonnel Weapon.

**CAPTAIN GEORGE L. ROBSON, JR.**, Infantry, is Chairman, Mine Warfare Team in the Weapons Department, U. S. Army Infantry School, Fort Benning, Georgia.

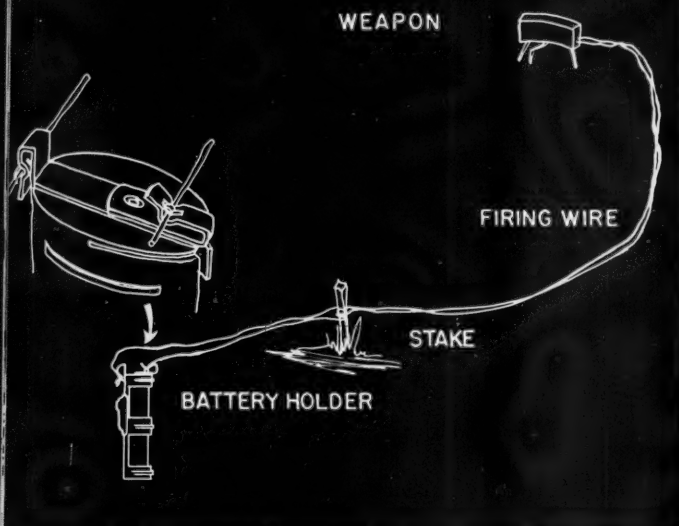
This directional one-shot weapon explodes and blasts steel fragments out in a fan-shaped beaten zone about 60 degrees wide. The fragments are highly effective against personnel to a range of 30 meters and have considerable effect out as far as 40 meters. At 30 meters, the cone of fire is about two meters high.

All this power comes from a rugged little weapon weighing about three pounds and carried in a two pocket bandoleer.

When installed, this portable cyclone looks harmless, and even fragile. Sitting on its three unfolded legs, the firing unit appears to be a miniature radar antenna—roughly rectangular in shape, 9 inches wide, 3½ inches high, and 1 inch thick. A firing wire 50 feet long leads from the electric blasting cap in the side of the unit to the source of electricity at the firing position.

Its power source—two ordinary flashlight batteries—is contained in





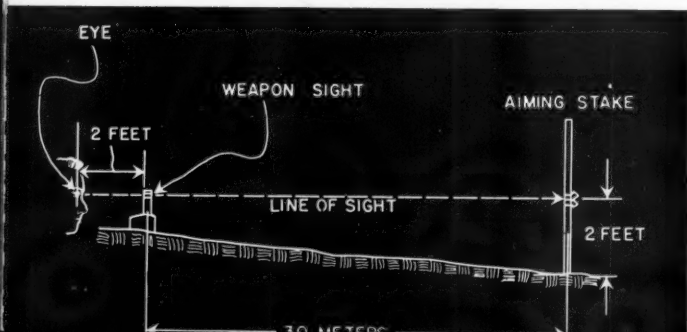
To install the weapon for electrical detonation, firing wire is tied to a stake and then is attached to the battery.

a device called, naturally enough, a battery holder. The firing switch itself is similar to the switch on any flashlight and is mounted on the side of the battery holder. With the exception of the two batteries, all Claymore components are contained in the bandoleer.

### Firing Procedure

IS this weapon, perhaps, difficult to install or fire? Not at all! Only these simple steps are involved:

1. Pick a good position. The weapon must be able to cover the target area.
2. Hollow out one of the cap wells in the firing unit. (In future models, this step will be eliminated by use of built-in cap wells.)
3. Place the electric blasting cap in the well.
4. Set up the firing unit so that it points generally toward the target area.
5. Select or construct an aiming point in the center of the target area about 40 paces from the weapon and about knee-high.
6. Center the aiming point in the sight slit.
7. If possible, clear all pebbles and other potential secondary missiles from an area one meter to the rear and sides of the firing unit.
8. Camouflage the firing unit.
9. Unfold the firing wire and tie it to a stake or other object near your foxhole so you can find the battery holder in the dark.
10. Insert batteries in the battery holder.



Setting up unit calls for aiming stake to mark center of target area which fans out at wide angles on firing.

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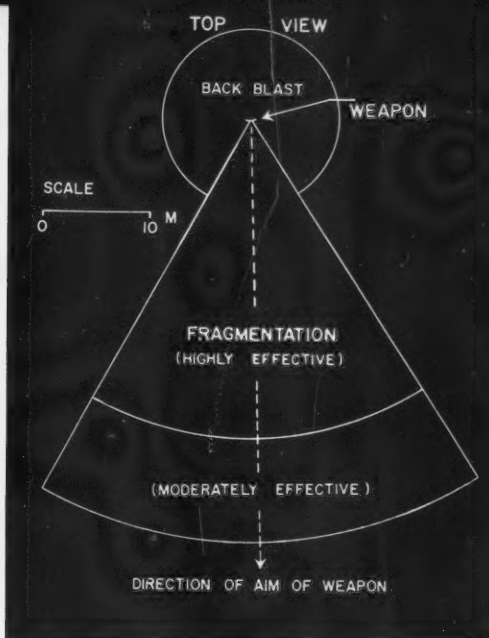
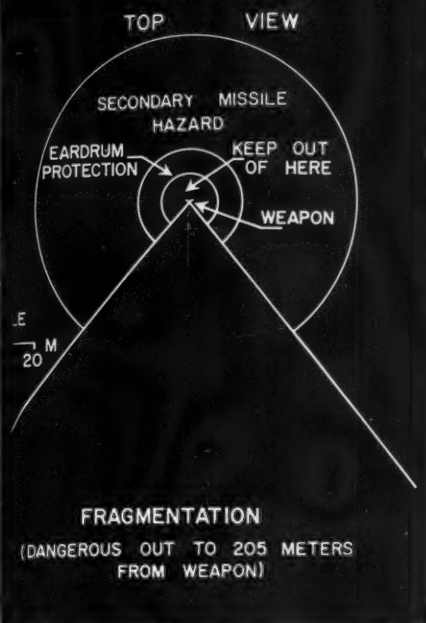
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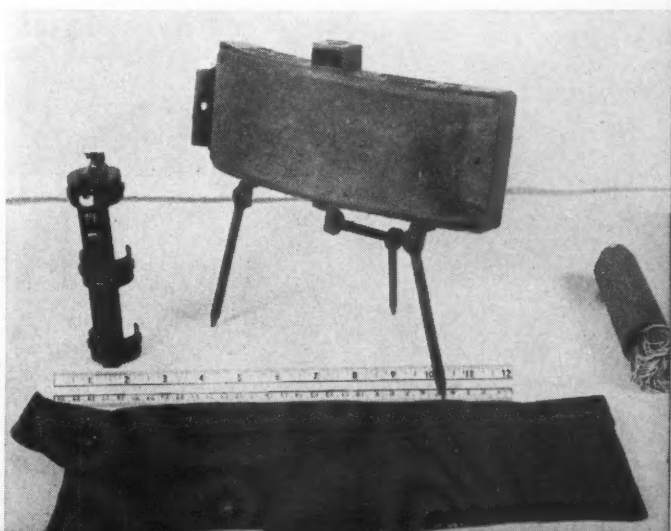


Although effective fragmentation fan is about 60 degrees wide, the danger area is about 80 degrees because scattered fragments fly beyond.

11. Remove shunt from far ends of firing wire.
12. Attach firing wire to contacts on battery holder.
13. When enemy soldiers reach a point within range, turn the firing switch "ON." This devastating weapon does the rest.

CLAYMORE provides the soldier on the firing line with a simple, highly effective answer to enemy mass attacks. In this guise, the ancient and honorable name of Claymore has returned to the modern profession of arms.

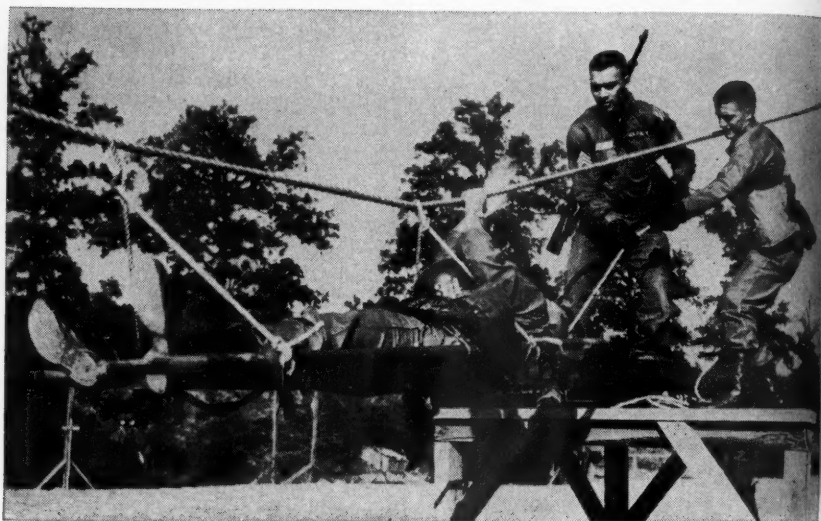
Looking deceptively like miniature radar antenna, unit packs devastating wallop as it scatters fragments against enemy.



AUGUST 1960

*A realistic test of soldier ingenuity—*

## Leader's Reaction Course



**A** BLOWN-OUT bridge holds up evacuation of casualties—

A deep swamp obstructs advance of ammunition—

A barbed wire entanglement is found to be mined—

These are but a few of the problems that now confront young 3d Infantry Division soldiers attending the Division's NCO Academy at Kitzingen, Germany. All together, nine stations have been set up in the Leader's Reaction Course to test ability of each student in solving problems likely to be encountered in combat.

Each man, negotiating the course in a group with four to six others, has at least one opportunity to be

Negotiating swampy areas calls for special techniques, students learn as they push a cart load of ammunition over the course.



a leader and to find a solution for the problem. At each of the stations, a senior noncommissioned officer instructor observes and grades the men on their reaction.

The new course is one of five recently added when the NCO Academy's five-week program was stepped up in length.



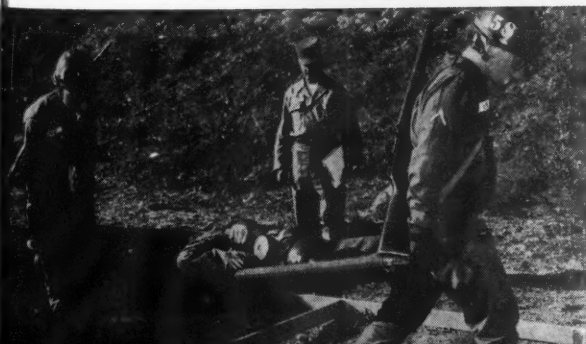
Barbed wire can be charged or mined. Above, students solve escape problem of "hot" fence. At left, ammunition cart goes over mined area.



The cart is across, but now the ammunition has to be moved over the obstacle without blowing up everything in sight.



Wearing their protective masks, students solve a problem in moving wounded companion through a contaminated area safely.





# Ultra-Sensitive Electronic Ear

A NEW electronic ear keen enough to pick up faint radio signals from interplanetary rockets has been developed for the U. S. Army Signal Corps by Hughes Aircraft Company. The super-detector, which weighs 25 pounds, is said to be the smallest and easiest-to-operate device of its kind.

Called Ruby Maser (Microwave Amplification by Stimulated Emission of Radiation), it has a ruby gem as its heart. Tests now are being conducted at the U. S. Army Signal Research and Development Laboratory, Fort Monmouth, New Jersey.

Used as an amplifier for radio and radar, the new maser has the ultra-sensitivity needed to provide an almost



static free booster to increase the range of signal communications. Former units weighed up to 500 pounds. The new device does the same job with a 12-ounce magnet, is light, portable, readily operated in combat.

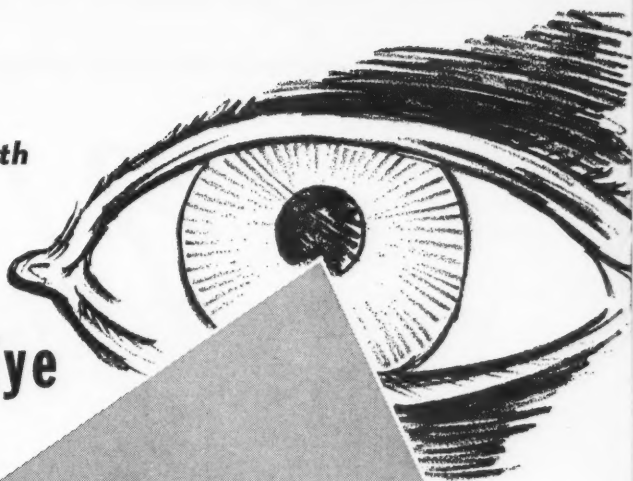


Heart of the maser is a two-carat synthetic ruby cooled to -452° F. which can detect and amplify almost imperceptibly faint radio signals.



Army experiments with

# All-seeing Electronic Eye



FIELD experiments with the Thermograph T-2, a combat surveillance device of extreme sensitivity which records emitted infrared thermals to reveal concealed men or vehicles, now are being conducted at the U. S. Army Combat Development Experimentation Center, Hunter Liggett Military Reservation, California. The device records on polaroid film the true outline of any object within its perimeter

by registering infrared heat waves.

A portable and highly mobile scanning apparatus, the Thermograph will even register personnel or equipment under cover of night or dense fog or other concealment. It has a long range, and can pick up objects as small as a mouse. The Thermograph is but one of many infrared devices developed by the Army Corps of Engineers and now undergoing field experimentation.

**A properly prepared Personal Affairs Portfolio  
can serve as**



**Captain John P. Crawford**

**E**VERY commanding officer, chaplain, physician—and many another Army officer as well—has been called on during his career to assist survivors through the first difficult days following the death of the head of the family. All too frequently they have discovered that even when there is a will, insurance and tangible property, the family does not know exactly what to look

for or even where to turn. And most have little or no idea of the various Army, Veterans Administration, Social Security and other government benefits available.

As a result of many personal experiences in such instances, this effort is being made to prescribe general guide lines in a simple approach to the task of placing in written form those matters which will have some effect on the security of dependents in event of death.

At the same time, it should be

**CAPTAIN JOHN P. CRAWFORD, Medical Service Corps, is on duty at Brooke Army Hospital, Fort Sam Houston, Texas.**

emphasized that a personal affairs portfolio need not be useful only in case of death of an Army member. It should contain information on many subjects pertinent to family welfare during extended absence of the family head for any reason.

Mental confusion, emotional and

Beyond such considerations, there are others. Benefits from various sources are not automatic. Applications must be filed promptly to assure prompt compensation. In many instances, eligible dependents lose badly needed income through failure to submit applications promptly. By having a properly

# GUIDELINE

irrational thinking often are common behavior patterns when death occurs in a family. Because most Army families move so frequently, these patterns are probably more acute than in civilian families that have lived for many years in the same community.

The Army makes every attempt through its Survivor Assistance Program, to aid in managing the household, notifying relatives and making funeral arrangements. Yet all such matters and others would be simplified if the head of the family had prepared a personal affairs portfolio.

Besides reducing the confusion and indecision of the widow, an expression of the husband's desires will aid immeasurably in the emotional stabilization of the widow and children during a period of stress and tension.

prepared portfolio, which among other things would list all sources of monetary death benefits, needless deprivation to dependents can be avoided.

## When to Make a Portfolio

THE question naturally arises—when should one initiate a personal affairs portfolio? The answer is simple—as soon as one assumes responsibility for the security of others, when one owns anything of value, or when one's death will result in any form of compensation becoming available.

One need not be married to make a portfolio necessary and desirable. This is especially true of those in the military service, where several forms of compensation are automatically provided in case of death. But to the head of a family in the Army, such provision is of acute

## **Your Family's Guideline**

importance, for with the new concept of rapid movement in modern warfare, time may not be available to prepare a portfolio. Further, assignments often take the Army member to distant areas where communications are difficult and facilities for attending to personal affairs are limited or entirely lacking.

### **How to Plan It**

CARE should be exercised to insure completeness, accuracy and ease in locating information. Without some sort of detailed plan, a portfolio would actually be nothing more than a catch-all which could be confusing rather than informative. The following guide lines are recommended:

1. Prepare an outline to include contents and general information on use of the portfolio.

2. Work up a draft and index the portfolio.
3. Consult the Judge Advocate for preparation of a will and, if appropriate, power of attorney.
4. Consult the Personnel Officer for interpretation of regulations concerning survivor benefits.
5. Include references to the various official publications covering all possible benefits—or if you prefer inclose the actual copies.
6. Prepare the portfolio in final form and bind in a permanent type folder.

ALL of this will mean, obviously, that the individual must personally know what benefits are provided by the various agencies, must know what he desires to include in his will and, if appropriate, what to include in making out a power of attorney.

Once having made up the portfolio, it is an excellent idea to be sure that members of the family understand how to use it. Have your wife read the portfolio; discuss and explain each section to her. Having accomplished that, do not hide the portfolio. Leave it in an unlocked, convenient but safe place. A copy may be placed in your official 201 file, but in any case a copy should be left where it can be found if needed. If you have a safe deposit box, obviously that is a good place to keep a duplicate.

### **What to Include**

EACH family has its own complex of problems which differ from that of any other. Therefore, it is impossible to state a rigid format common to all personal affairs situations. Following are some general

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### ***"Your Personal Affairs"***

A revised 24-page booklet *Your Personal Affairs* (DOD Pamphlet 6-15, Department of the Army Pamphlet 355-101) has been published as a guide to military personnel. Stressing the importance of having an up-to-date record of vital personal documents and papers, the booklet explains purposes of a will and power of attorney; it covers briefly income taxes, various forms of life insurance, home loans, military retirement, Social Security, pensions, the Uniformed Services Contingency Option Act and the Civil Relief Act of 1940. Information also is provided about dependents' and survivors' benefits and other pertinent data. Included is a two-page personal affairs record form for individual use.

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considerations which may be adapted to fit individual needs:

**General.** This section should contain information on use of the portfolio, and to whom it should be sent for administration of contents in event of simultaneous death of husband and wife. A reminder of necessity for prompt submission of applications for benefits, and instructions as to how the next of kin can secure copies of a death certificate should be included. Date and place of preparation of the portfolio and dates of review should be included.

**Notifications.** All agencies to be notified at time of death should be listed. Also addresses of special friends or relatives may be included.

**Will.** Do not place original copy in the portfolio, but an unsigned copy may be included. The original copy should be located with other important papers in some safe place, or it may be filed with the Adjutant General, Department of the Army. (See "Making a Will," June 1960 DIGEST.)

**Power of Attorney.** If appropriate, include this paper. Briefly there are two types — *general*, which grants another person the power to act in any matter such as handling bank accounts, executing contracts and so on; and *special*, which is drawn for some single specific purpose such as sale of a car.

**Benefits and Pensions.** This section should contain a list of benefits from any source for which the widow and children may be eligible. If desired, a chart may be prepared to give a graphic picture of amounts of benefits available over a projected period of time.

**Gratuity Pay.** The amount of the six-month death gratuity pay granted by the Army should be stated;

also the method of obtaining this pay. Settlement of the husband's final pay account, and address where inquiries are to be forwarded should be included.

**Social Security Benefits.** Include here the actual Social Security card or its serial number. There should also be a reminder that upon death of the husband a lump sum payment to defray burial expenses will be paid by the Social Security Administration—this in addition to benefits or any reimbursable burial expenses that may be paid by Department of the Army. Instructions to survivors on how to apply for widow and children benefits should be included. Again it should be emphasized that time is of the essence in making applications for such benefits.

**Veterans Administration Benefits.** Benefits to the unremarried widow are referred to as "Dependency and Indemnity Compensation," based on pay of the husband. Other Veterans Administration benefits also are available to a widow with minor children. These are in addition to Social Security benefits and, like them, are tax free.

**Uniformed Services Contingency Option.** Whereas the benefits mentioned above are applicable on death occurring while on active duty, the Uniformed Services Contingency Option Act provides an annuity for survivors of deceased retired persons. Prior to completing eighteen years of service, each person must state his desires concerning participation in the various Contingency Options available. (See "The Choice Is Yours," May 1959 DIGEST.) In this section should be included all pertinent material on the choice you may have made.



## ***Your Family's Guideline***

**Insurance Policies.** A description and number of each policy, value, name of company, should be included. Also instructions for settlement options should be included. As with other valuable papers, insurance policies should not be included, but should be maintained in some safe but accessible place.

**Assets.** A listing of stocks, bonds, mutual fund holdings, bank accounts, real property deeds, automobile titles, and any other assets are listed here. Addresses of bro-

kers, banks or attorneys or others who have knowledge of such assets should be kept up to date and included. Usually disposition instruction for assets are incorporated in the will.

**Debts.** Record should be maintained of liens, mortgages and so on. Failure to record debts as well as assets often causes the next-of-kin to be misled as to actual net value of the estate, thereby causing improper management decisions.

**Investment Guidance.** Depending

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***Service to troops—active and retired—and their families  
keynotes the Army's***

# **Survivor Assistance Program**

**Major James W. Baxley**

WHILE the responsibility for keeping his personal affairs in order is the personal obligation of every soldier to his family, the Army assumes that not every soldier will unfailingly provide for his family's needs. Even when the individual may have prepared his personal affairs, his death throws a burden on the widow and other survivors.

Bearing this in mind, a vigorous Survivor Assistance Program, monitored by The Adjutant General's Office, has been adopted and is in operation throughout the Army. The program provides bereaved families with advice and assistance during the critical period immediately following the death or entry in a missing status of a service member.

The Survivor Assistance Program is an adjunct to the casualty reporting system. It takes over where casualty notifications and condolences stop.

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**MAJOR JAMES W. BAXLEY, Adjutant General's Corps, is Chief, Casualty Section, Adjutant General's Office, Department of Army.**

Survivor assistance is instituted immediately after notification is sent to the next of kin that a member of the family is dead or missing. An information copy of the notification telegram goes to the Army commander in whose area the family resides. This is the commander's signal to appoint an assistance officer, preferably of field grade, to visit the widow and offer assistance. During his initial visit—usually within one to three days—he explains Government benefits available and gives the wife a copy of Department of Army Pamphlet 608-4 *For Your Guidance*, for further reference.

The assistance officer extends condolences, inquires into financial needs, counsels about extent of funeral expenses that will be paid by the Government and about other benefits immediately available. He assists with funeral arrangements, and after the ceremony advises and assists in gathering and preparing necessary documents needed to apply for Social Security,

upon circumstances, an integrated plan for management of insurance proceeds and other assets may be of great value to the widow. In some instances the individual may incorporate such plans in his will. Extent of advice and caution against speculative issues is of course an individual decision.

**Education of Children.** Notice should be made of service academies available to qualified sons, and information on various scholarships available through The Adjutant Gen-

eral. Also, wishes of the family head in this area may serve to guide survivors.

**List of Documents.** Essential is a complete list of documents, including their location. They should include all pertinent papers, birth and marriage certificates, insurance policies, will, power of attorney, stocks, bonds, Social Security account card, discharge certificates, automobile title and registration papers, property titles. As already mentioned, important papers

Veterans Administration, and other benefits. If the family is moving to another location, he helps with transportation requests and inventory of household goods. If further assistance is needed at the new location, he transfers the case to the appropriate Army commander for follow-up action.

If the wife is in an oversea command at the time of the member's death, the oversea commander renders immediate assistance and makes arrangements for the family's return to the United States. He then forwards by airmail the assistance case file of actions taken to date to the Zone of Interior Army Commander in whose area the family will reside.

When the wife and service member are at the same location in the United States at time of the member's death, immediate assistance is rendered by the local commander. Notification of death in these cases usually and preferably is made personally by an officer. Payment of the six months gratuity pay is made to help the family meet immediate financial obligations, funeral arrangements are made, and movement of household goods is handled.

As part of the active Army's continuing program to provide maximum possible assistance to its alumni, the Survivor Assistance Program recently was extended to include assistance to survivors of retired personnel.

**BENEFITS** of the program are many. Besides providing prompt, sympathetic and personal assistance during an extremely trying period, it insures that families receive as swiftly as possible all benefits to which they are entitled.

The program demonstrates the Army's sincere interest and concern for welfare of all its members. It reduces or eliminates the possibility of animosity toward the Army by families over loss of husbands or sons while in the service; and it also helps reduce the amount of Congressional and other special correspondence received at all echelons on behalf of survivors. Above all, it leaves a lasting and favorable impression of the Army among survivors and their families.

A great responsibility rests on the officer who may be appointed to act as Survivor Assistance Officer. Prompt action, tact, sincere sympathy and understanding in working with bereaved families can best display the Army's feelings in the tragic loss of a loved one in the service of his country. Often the Survivor Assistance Officer encounters difficult and unpleasant situations, compounded when people temporarily lose their rationality through shock and sorrow. Tactful, understanding, sympathetic handling of all situations can do much to alleviate such feelings and put the Army in the best possible light.

## **Your Family's Guideline**

should not be included in the portfolio, but should be kept in a safe, accessible location.

**Survivor Assistance Program.** The Army's efforts in this area should be explained. A summary court officer is appointed if no legal representative or widow is present at time of death of the individual. Legal authority includes performing notarial duties. If the widow is present, a Survivor Assistance Officer will be designated to help. This usually includes making funeral arrangements, securing death gratuity pay

to help meet the family's immediate expenses, and other assistance.

**Funeral Arrangements.** Any preference should be outlined, including church services, burial location, authorized decorations and service medals.

**Miscellaneous.** This section should contain information on dependent's medical care, Army privileges (such as commissary, legal assistance and the like) available to survivors, information on automobile registration and insurance, income tax considerations, any state benefits that may be available.

### **Keep It Current**

ONCE it has been prepared, maintenance of the portfolio should be a continuous process of review and modification every time circumstances of the family may change. These changes would include promotion, longevity increase, pay status, births, deaths or other dependency changes, laws or regulations affecting pay, compensation or benefits, insurance or investment program changes, acquisition or disposal of property. As a minimum, it is a good suggestion to revise the portfolio annually, and to post a record of the review in section one.

Upon retirement, obviously, the portfolio should certainly be modified and brought up to date. After retirement, eligibility for survivor benefits would change considerably; and the effects of the Uniformed Services Contingency Option Act would come into force.

Any reader-identification with the circumstances presented here is purely intentional, with the hope that any who have so far failed to do so, will be motivated to prepare a personal affairs portfolio.

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# NEWS

## of professional interest

### **Summer Training**

Active duty training for some 280,000 Army Reservists is being conducted at major posts throughout the Nation this summer. Non-unit personnel—those assigned to a control group or USAR school—make up about 25,000 of the Army Reserve total in camp this year. Sites for this "One Army" training range in location from Camp Drum, New York, to Fort Ord, California, and from Fort Jackson, South Carolina, to Fort Lewis, Washington. ROTC students also are attending the training period, and on graduation and recommendation of the Professor of Military Science and Tactics, will be eligible for appointment as second lieutenant in the Army Reserve or the Regular Army.

### **Bright Star/Pine Cone III**

Having recently completed the biggest peacetime airlift in history during Big Slam/Puerto Pine, the Army and Air Force again join forces in a major field exercise in August, to be known as Bright Star/Pine Cone III. About 11,000 troops of the 101st Airborne Division, together with 6,000 tons of equipment, will be airlifted from Fort Campbell to dispersal bases in the Carolinas and Virginia.

### **Electronic Testing Facility**

Engineering and performance tests on surveillance drones will be carried out at the Army Electronic Proving Ground, Fort Huachuca, Arizona, under a contract recently awarded to Pan-American World Airways, Inc. The facility to be set up and operated by Pan-American also would determine reaction time on each other of the many new Army electronic weapons and devices when deployed on a nuclear battlefield.

### **AUSA Annual Meeting**

The 1960 annual meeting of the Association of the United States Army is scheduled for 8-10 August at the Sheraton-Park Hotel, Washington, D. C. A feature of the event will be the inauguration of the General George Catlett Marshall Memorial Dinner on 10 August, at which the Honorable Robert A. Lovett, former Secretary of Defense, will speak.

Meetings of the AUSA will be opened by Secretary of the Army Wilber M. Brucker. General Lyman L. Lemnitzer, Army Chief of Staff, also will speak. The program will include presentations by General Dr. Hans Speidel, Commander of Allied Land Forces, Central Europe, SHAPE; General Bruce C. Clarke, Commanding General, U. S. Continental Army Command; Lieutenant General John C. Oakes, Deputy Chief of Staff for Military Operations; Lieutenant General Arthur G. Trudeau, Chief of Research and Development, and other Army leaders.

### **MAN Statuette**

Conferees who attended the largest Army-civilian effort toward establishing closer teamwork in the development of equipment for defense — Project MAN staged in May at Fort Benning—all received a statuette in honor of the Ultimate Weapon—Man.

The statuettes depicting an Infantryman charging were presented in recognition of the fact that, in spite of advances in mechanical and electronic means for waging war, it is the individual soldier who must wield those weapons and finally occupy the ground held by the enemy. The statuettes were provided by the Sperry Gyroscope Company.

## **ADM Team**

A team of nuclear weapons instructors from the U. S. Army Engineer School at Fort Belvoir, Virginia, now is visiting Army headquarters throughout the world to present briefings on employment of atomic demolition munitions (ADM). Briefings are conducted for senior commanders and general staff officers, and a more detailed 90-minute presentation for Engineer commanders and staff officers who would be directly involved in employment of ADM. The team of three officers provides its own training aids. It will be available to appear at service schools, in United States Army Alaska, and major commands in continental United States.

## **USAR Unit Award**

A new USAR Unit Award will be presented by the Reserve Officers Association of the United States to superior units of the United States Army Reserve beginning next June. Any company-size USAR troop program unit with a minimum actual strength of 25 will be eligible to compete.

Standards for selection will be based on performance at reserve duty training and at the annual active duty for training. A list of qualifying units will be forwarded to the Commanding General, U. S. Continental Army Command, and such units will receive a Superior Unit Certificate awarded by the Secretary of the Army. From the list of superior units, each commander will nominate one for the ROA award. The Commanding General, U. S. Continental Army Command, will appoint a board to meet in February each year to consider the nominations and recommend the outstanding unit.

## **Army Single Manager**

The Secretary of the Army has been designated as Single Manager for automotive supplies and for construction supplies, it has been announced by the Department of Defense. The Army will provide all military services with military automotive supplies including vehicular supplies and repair parts, tires and tubes, engine components and the like. In the field of construction equipment, it will provide repair parts, diesel engines and components, lumber and related construction-type items. The Army will be charged

with complete responsibility for wholesale supply of all the Armed Forces in their respective commodity areas.

An integrated distribution system and uniform operating procedures are being developed to facilitate supply operations within the single manager operations now established within the Department of Defense. Commodity Single Manager assignments have already been established for Subsistence (Army), Clothing and Textiles (Army), Medical Supplies (Navy), Petroleum (Navy), General Supplies (Army), Industrial Supplies (Navy).

## **Earthquake Emergency Aid**

The earth was still shaking in tragedy-torn Chile when the U. S. Army and Air Force teamed in a joint effort to rush two field hospitals, medical supplies and other units to the stricken area.

The 7th and 15th U. S. Army Field Hospitals were airlifted to Chile by Air Force aircraft—the first from Fort Belvoir, Virginia; the second from Fort Bragg, North Carolina. Each is a 400-bed hospital with some 62 nurses, 27 doctors and 318 enlisted medical personnel. Attached to the 7th Field Hospital also are personnel of the 13th Field Hospital and DeWitt Army Hospital, both at Fort Belvoir.

In addition to the hospitals, two four-man water purification units from Fort George G. Meade, Maryland; two field laundry units (mobile) from Fort Lee, Virginia; three medical maintenance units drawn from the Louisville Medical Depot, Louisville, Kentucky; communications personnel of the 50th Signal Battalion and linguists of the 519th Military Intelligence Battalion, both from Fort Bragg, rounded out the Army's contribution to the mercy airlift.

Supplies rushed to the quake-ridden country included dextrin (similar to blood plasma), syringes, tetanus serum, anti-gangrene serum, blood transfer units and saline solution.

Besides rushing aid to Chile, the Department of Defense announced that a U. S. Nutrition Team already there would be kept in Chile during the country's emergency. The team was concluding its work and about to return when earthquakes and floods struck the South American country.



## Arctic Combat Boot

A new white insulated rubber combat boot to provide increased protection against Arctic temperatures has been developed by the Army Quartermaster Corps. In rigorous tests, the boots have been worn by members of the International Geophysical Year Expedition in the Antarctic, where they are reported to have functioned adequately in temperatures reaching  $-102^{\circ}$  F. The boot can be worn with only one pair of socks, whereas the former mukluk boot and Arctic felt boot both required several pairs. It uses the vapor barrier principle in sealing three layers of wool fleece in the upper and two layers of felt in the midsole between inner and outer rubber layers. The seal prevents sweat and outside moisture from wetting the fleece and thereby destroying insulating properties.

## Historical Volume

The 47th volume in the "United States Army in World War II" series produced by the Office of the Chief of Military History is entitled *Chronology: 1941-1945*. Compiled by Mrs. Mary H. Williams who formerly served with the Office of the

Chief of Military History and now is a publications writer in the Office of Armed Forces Information and Education, the 660-page volume includes the sequence of World War II events from the day the bombs dropped on Pearl Harbor to the Japanese surrender. It covers ground operations, air and naval support, crucial actions of both Allied and enemy forces. The book is on sale for \$4.75 by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.

## Improved Tear Gas

Development of an improved tear gas—so new it has not even been named—has been announced by the Army. It causes no permanent injury and its effects wear off quickly in fresh air, but the effects are intense, causing severe burning and watering of the eyes, irritation of respiratory passages, burning sensation on moist skin, painful forced coughing and involuntary closing of the eyes. Dispersal of only one part in a million of fresh air causes extreme discomfort instantly on exposure. The gas can be delivered in a grenade or any device used to spread conventional tear gas.

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### Back Cover

FOURTH in a series of posters supporting Army Information objectives, DA Poster 355-7 is currently being distributed to Army units and organizations to advance the theme: "The Soldier Is Tops—The Indispensable Element for Defense of the Nation." The poster is scheduled for release world-wide to coincide with the annual meeting of the Association of the United States Army at Washington, D. C. 8-10 August 1960, which will bring together top-level representatives of Army, industry and press for review of progress toward Army modernization objectives.

### Medical Histories Available

Fifteen volumes have now been published in the series "The History of the Medical Department, United States Army in World War II," and 23 more are planned. The publications contain data on caring for large numbers of injured.

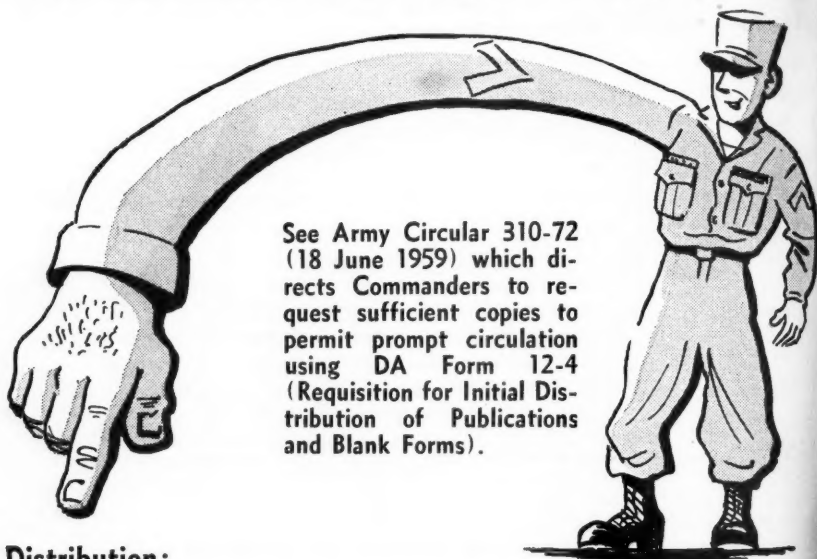
Commanding officers of medical units are authorized to requisition copies through the usual Adjutant General publication channels, while copies for personal use may be purchased from the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

In announcing the latest list, The Surgeon General points out that due to lim-

ited distribution of the World War I History of the Medical Department, very few World War II Medical Corps officers knew of its existence. As a result, many lessons had to be "relearned" during World War II.

Titles of volumes currently available are: *General Surgery; Hand Surgery; Neurosurgery, Vol. I and II; Ophthalmology and Otolaryngology; Orthopedic Surgery, ETO; Orthopedic Surgery, MTO; Physiologic Effects of Wounds; Vascular Surgery; Cold Injury, Ground Type; Dental Service; Environmental Hygiene; Personal Health Measures and Immunization; Communicable Diseases; Hospitalization and Evacuation, Zone of Interior.*

## Do You Get the Digest Regularly?



See Army Circular 310-72 (18 June 1959) which directs Commanders to request sufficient copies to permit prompt circulation using DA Form 12-4 (Requisition for Initial Distribution of Publications and Blank Forms).

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To be distributed in accordance with DA Form 12-4 requirements.

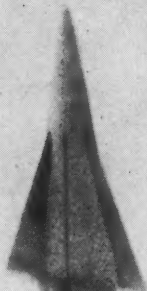


## Zeus Aloft

FIRST test of a new type underground launching facility proposed for Nike-Zeus was successfully conducted at White Sands Missile Range, New Mexico, in April. This was the first time that a motor of 450,000-pound thrust was successfully fired from an underground launcher. The test was supervised by the Army Rocket and Guided Missile Agency, directing overall Zeus development.

Among advantages foreseen for an underground launching cell are cheaper construction costs and uniform temperatures that would eliminate need for extensive air conditioning equipment. Such launchings also would be more resistant to enemy attack, require less maintenance.

Right is view of Zeus test model clearing its underground launcher, while at left is firing of an earlier test model.



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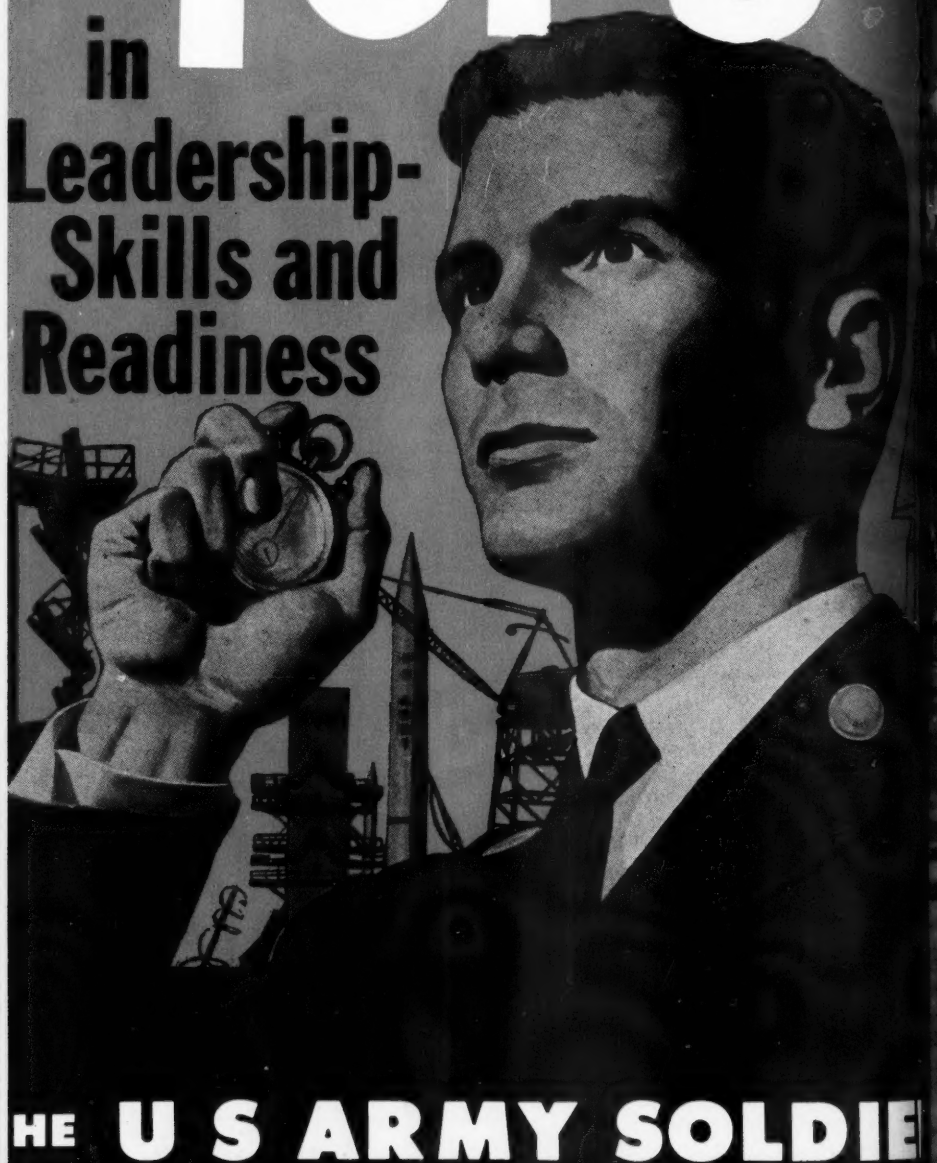


DIGEST

# TOPS

in

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